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FIG. 1A

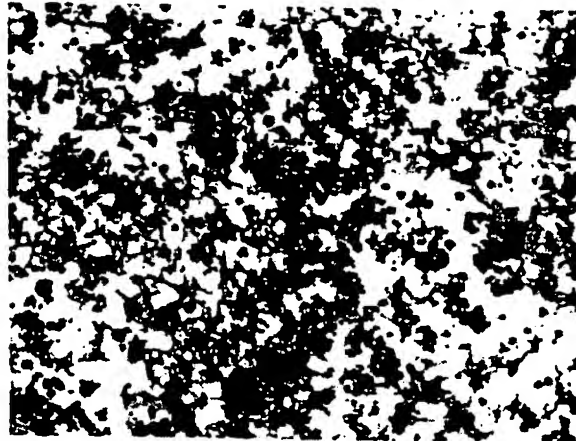


FIG. 1B

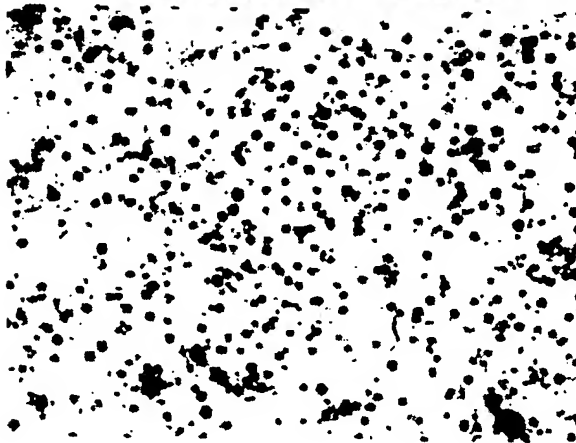


FIG. 2A

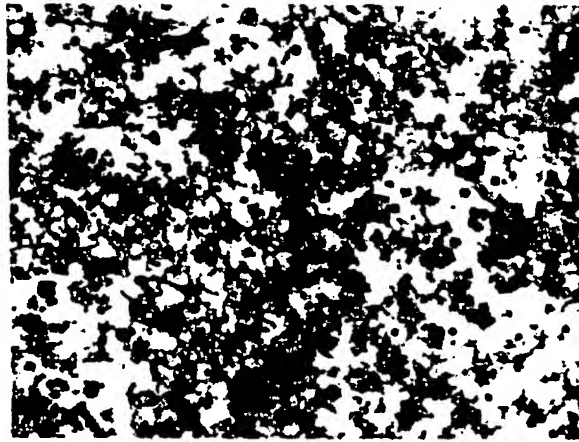
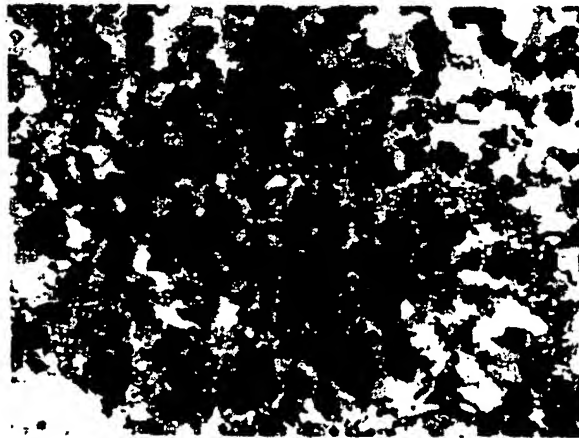


FIG. 2B



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Our Ref. No. 245-67734
For: METHOD AND SYSTEM FOR
CLASSIFYING A SCENARIO
Inventor(s): Chaplen et al.
Express Mail Label: EV339206009US
Mailed: March 12, 2004



FIG. 3A



FIG. 3B

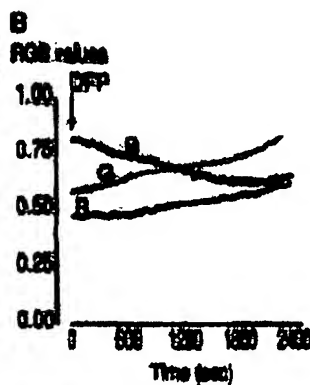


FIG. 3C

FIG. 4A



FIG. 4B



C



FIG. 4C

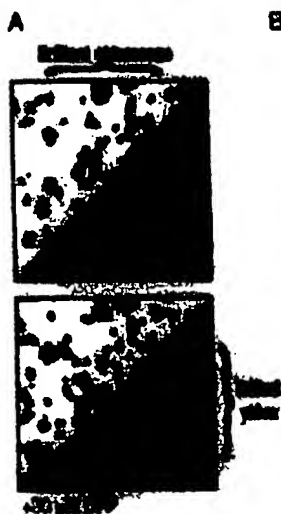


FIG. 5A

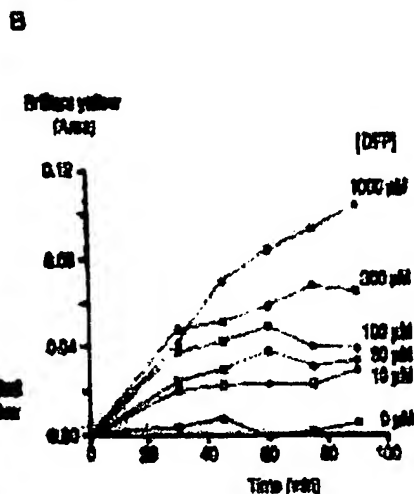


FIG. 5B

FIG. 6A

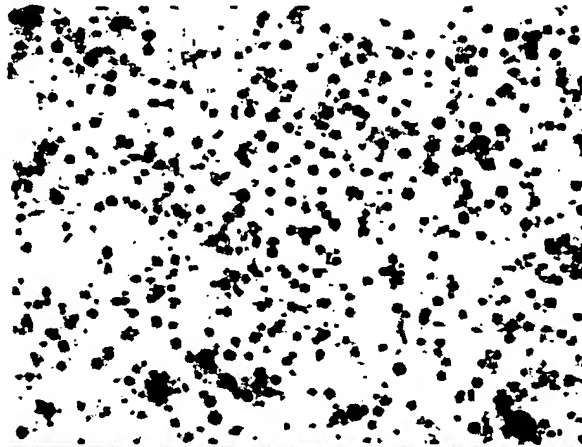


FIG. 6B

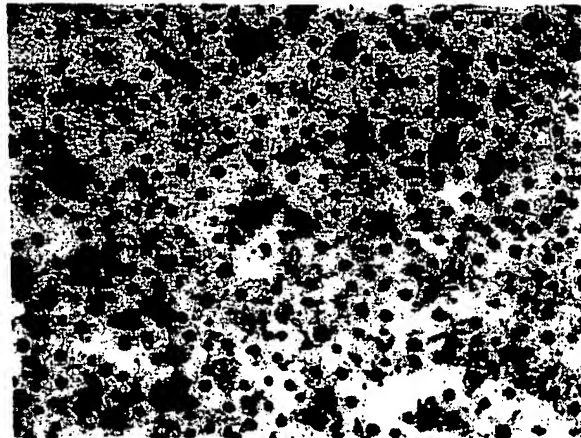


FIG. 6C



Before adding bacteria After adding bacteria

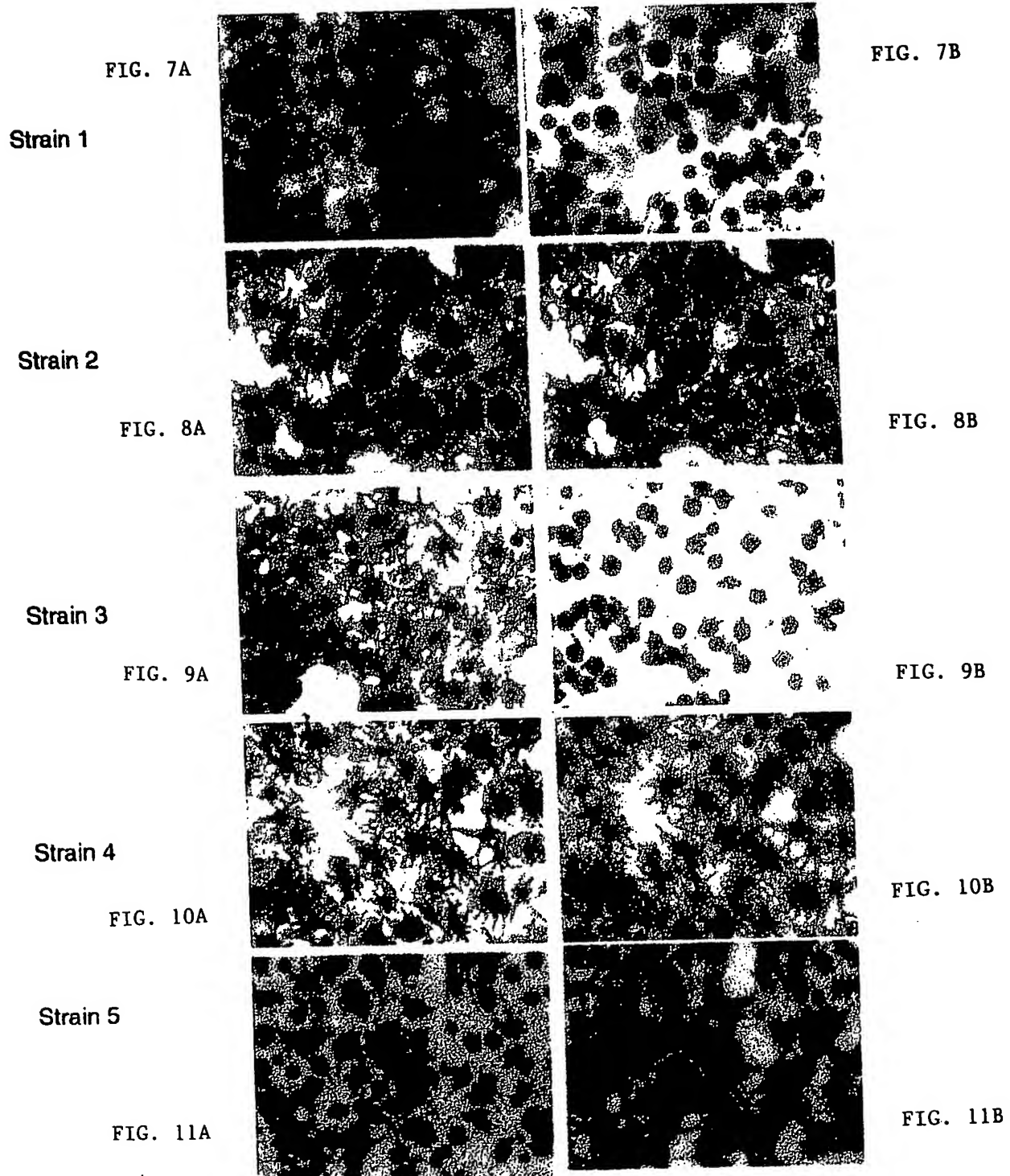


FIG. 12A

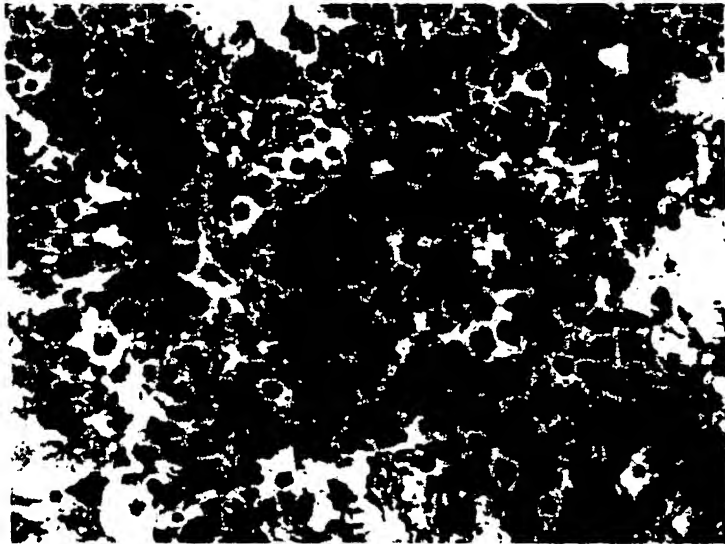


FIG. 12B

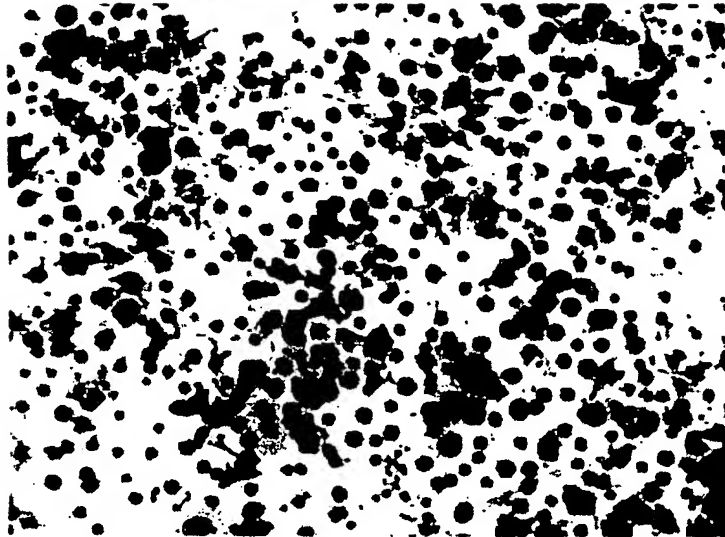


FIG. 13



















	Agent	Chemical Type	Effective dose	Direct Effects	Challenge A (norepinephrine)	Challenge B (forskolin)
Control	None					
I	DFP Mipafox Paraoxon	phosphorofluoridate phosphorofluorodiamidate phosphate	ppm			
II	PMSF EPN	sulfonyl fluoride phosphorothionate	ppm			
III	Mevinphos Dichlorvos	phosphate phosphate	ppt			
IV	Trichlorfon	phosphonate	ppt			
V	Chlorpyrifos Fenitrothion Morphos Carbaryl Methomyl 2,5 Hexanedione Acrylamide	phosphorothionate phosphorothionate phosphorothionate carbamate carbamate diketonamide	ND			

FIG. 14B

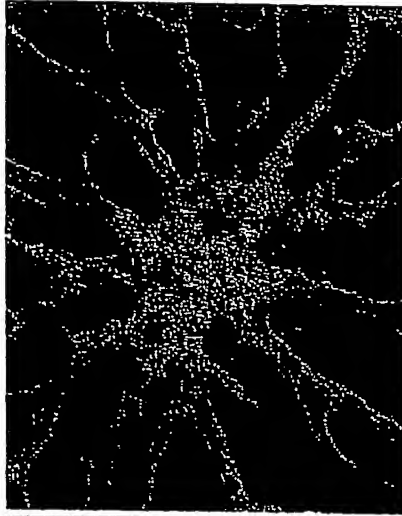


FIG. 14D

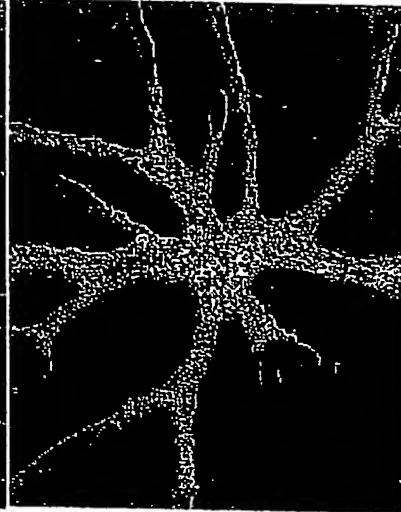


FIG. 14A



FIG. 14C

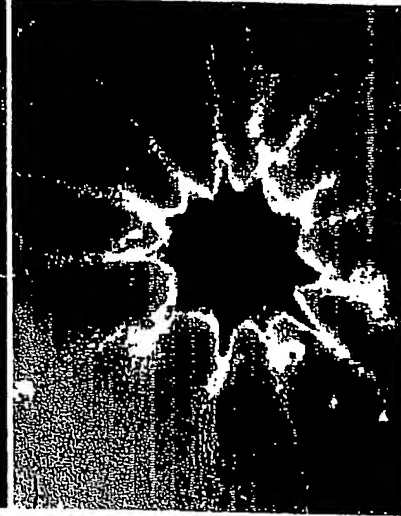


FIG. 15A

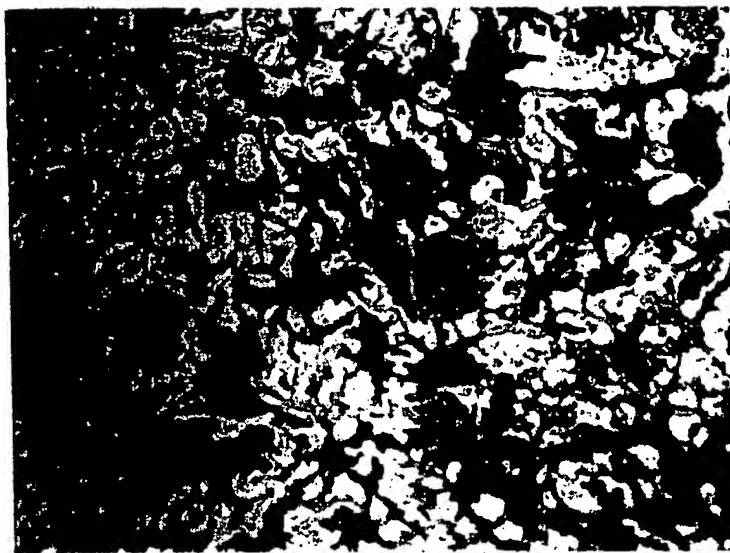
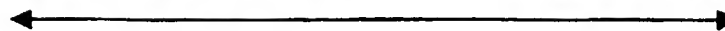


FIG. 15B



100 microns

FIG. 16C



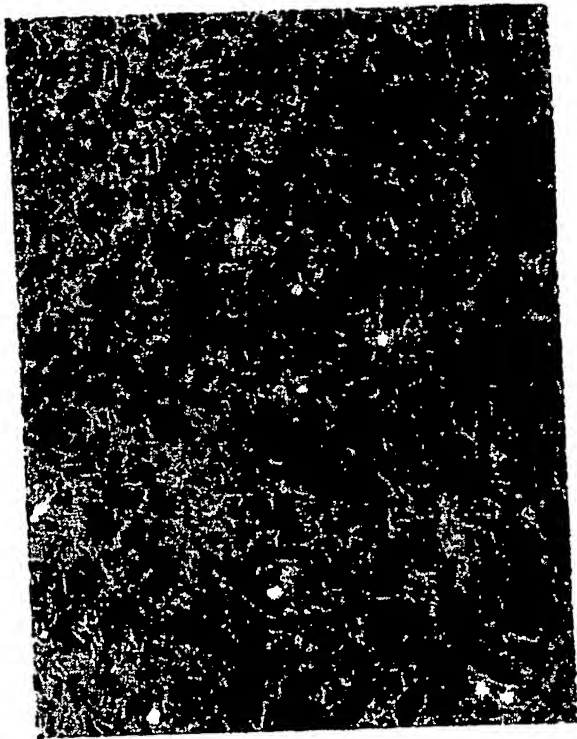
FIG. 16B



FIG. 16A

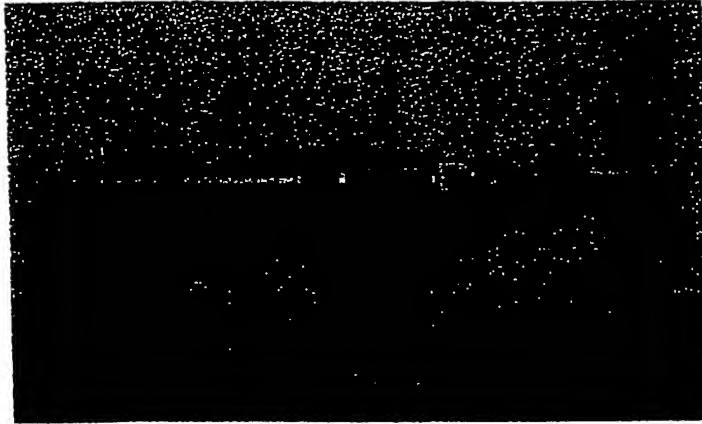


FIG. 17



Hardware construction for the encapsulation of SOS sensor cells.

FIG. 18A



Extruder
hardware
(assembled)

FIG. 18B

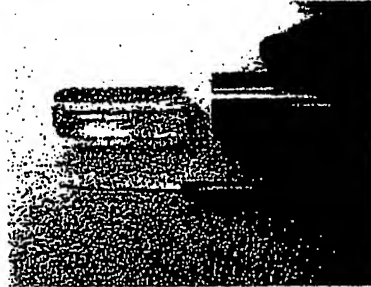
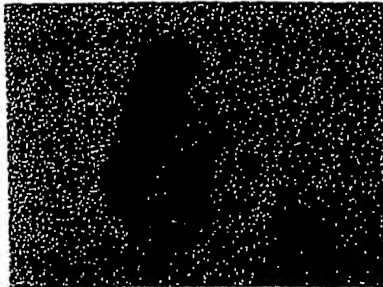


FIG. 18C

Air-flow
adjustment
mechanism

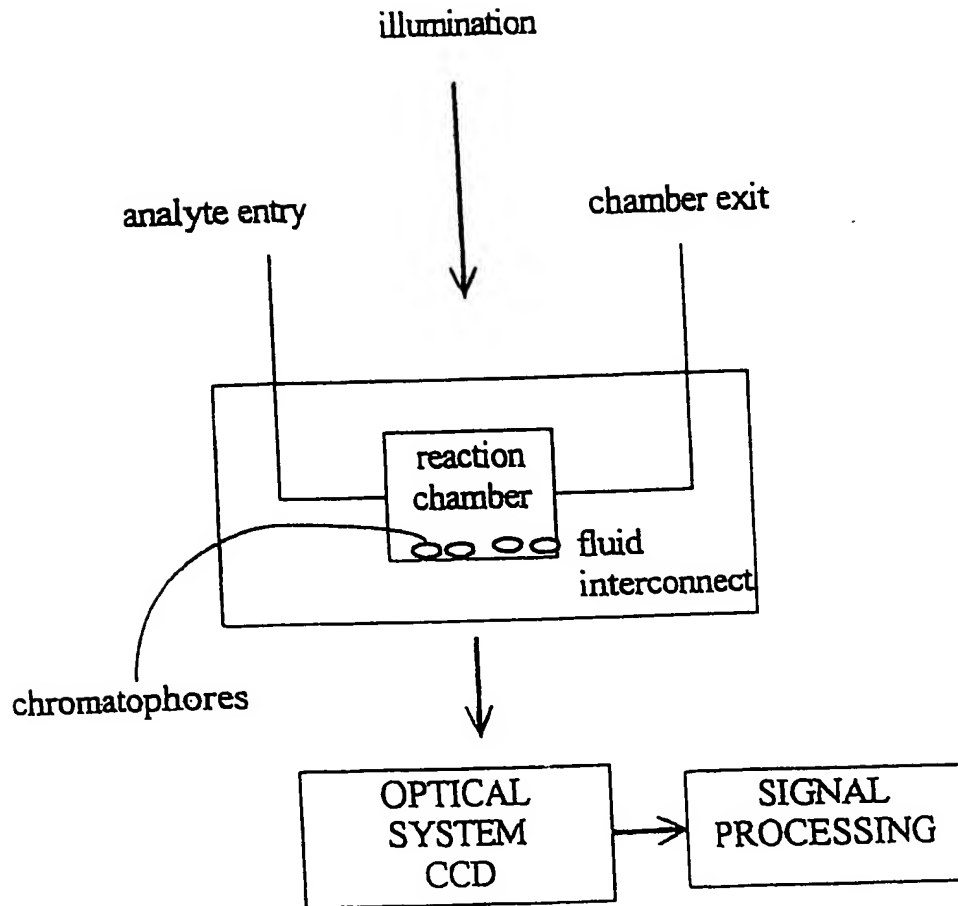


FIG. 19

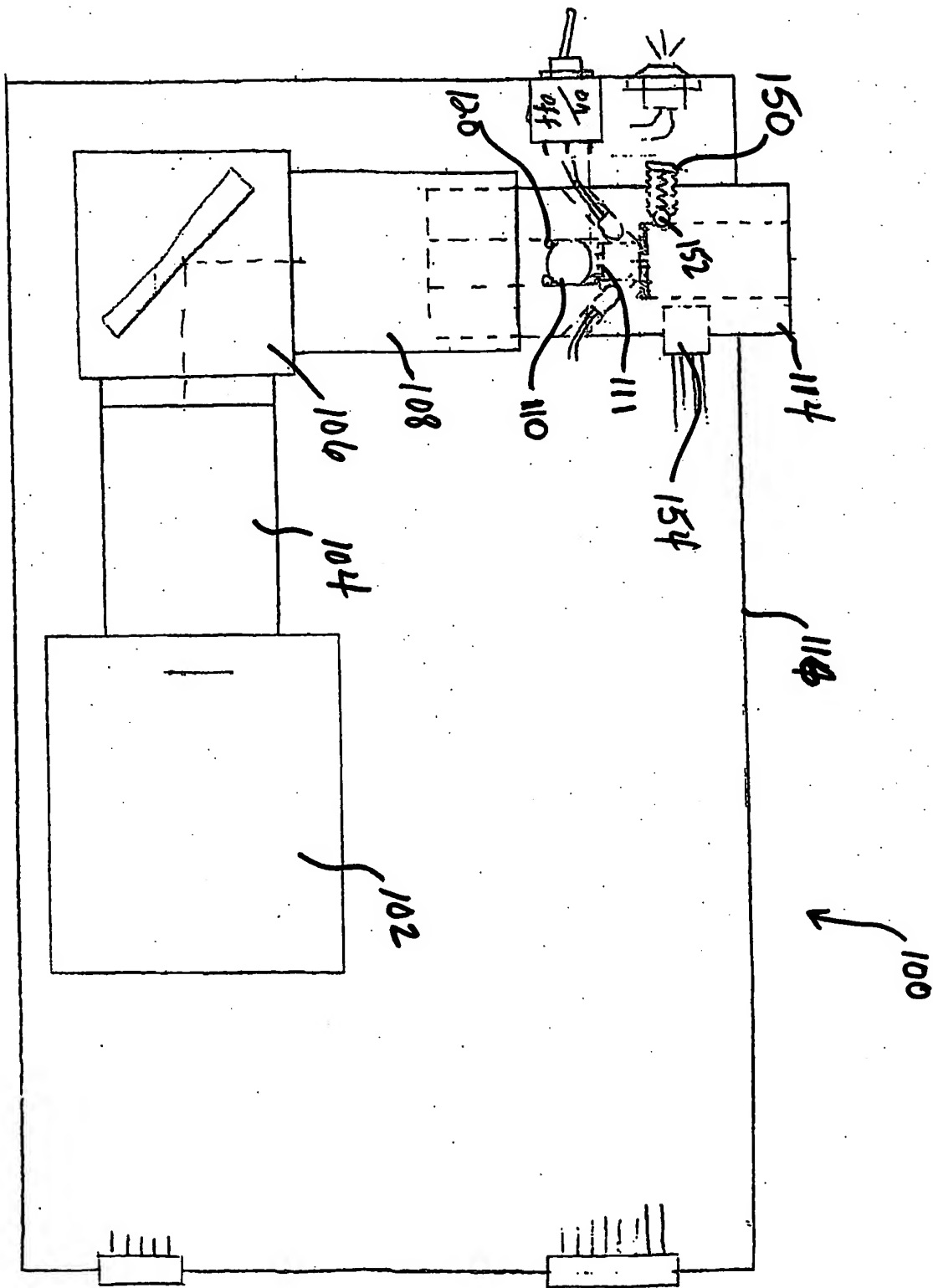


FIG. 20

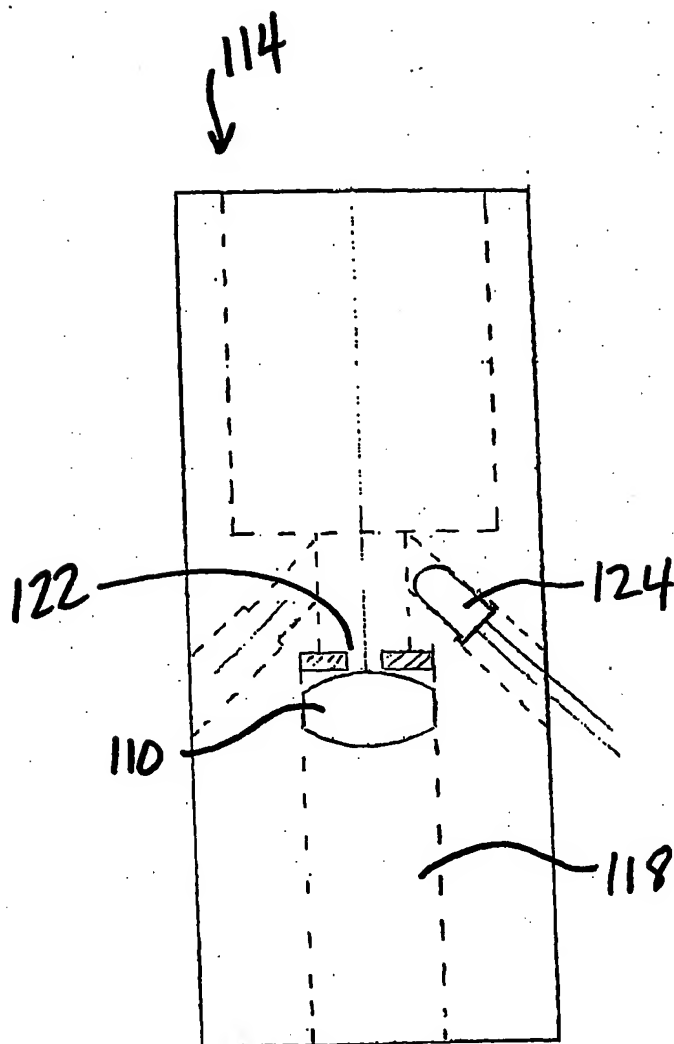


FIG. 21

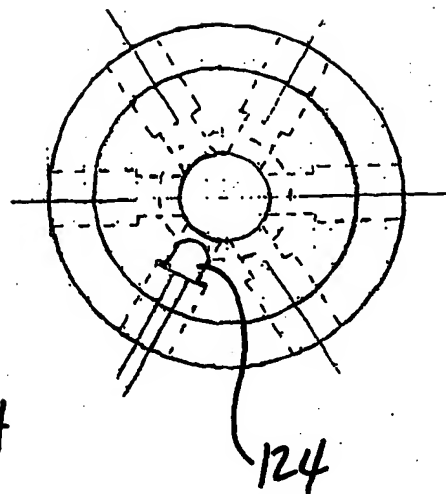


FIG. 22

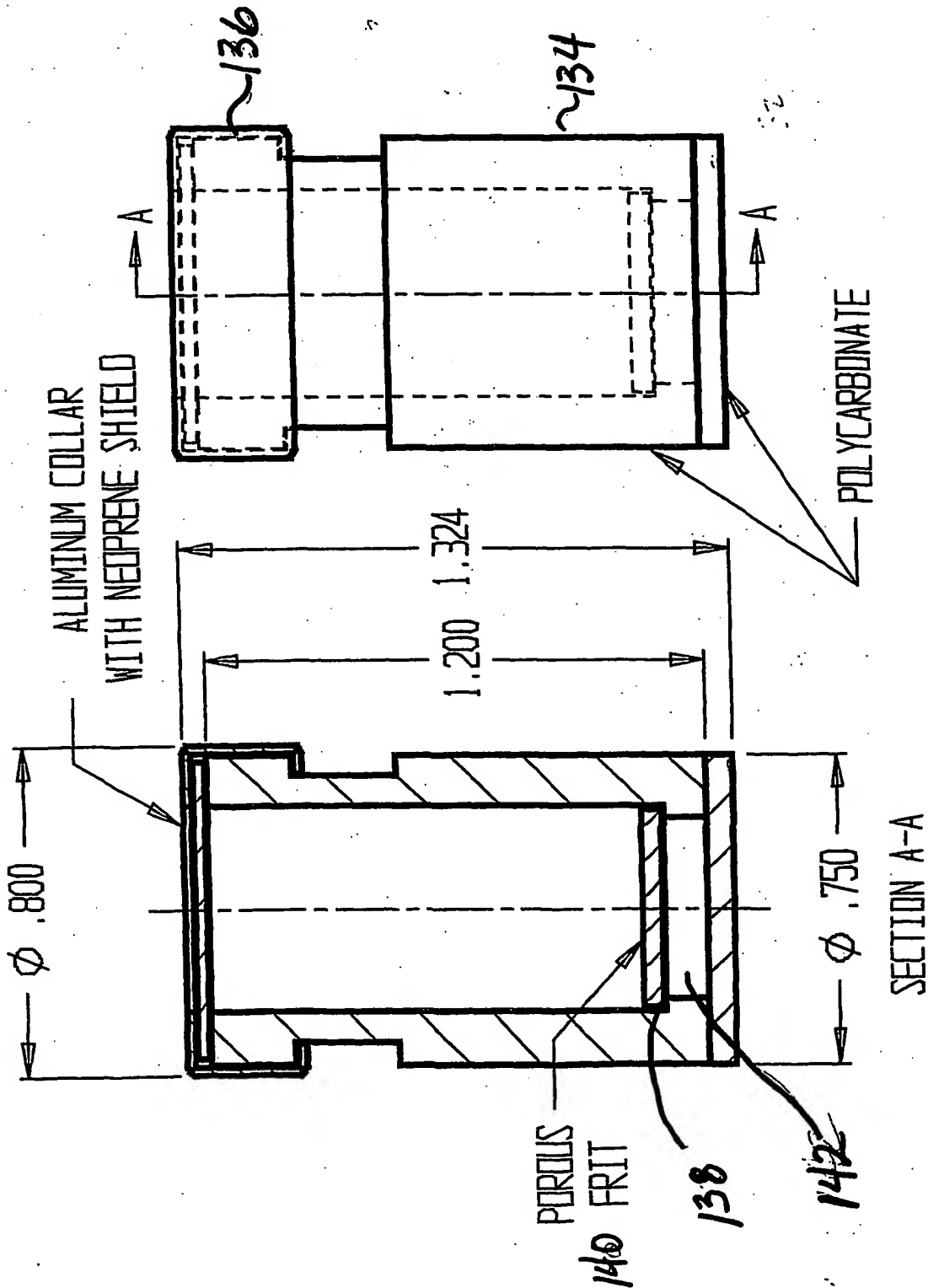


FIG. 23

APOLLO CHAMBER ASSEMBLY

FIG. 24

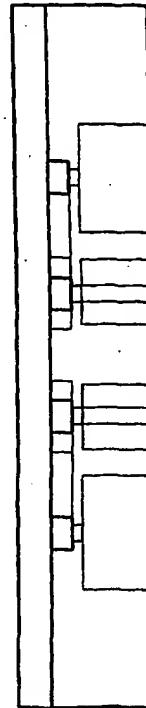
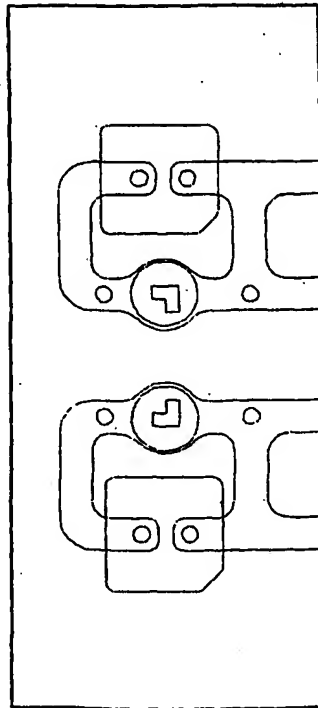
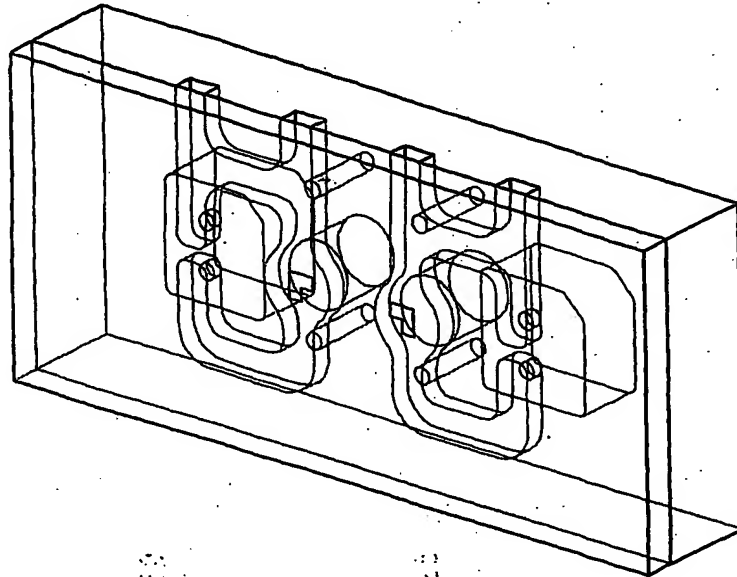
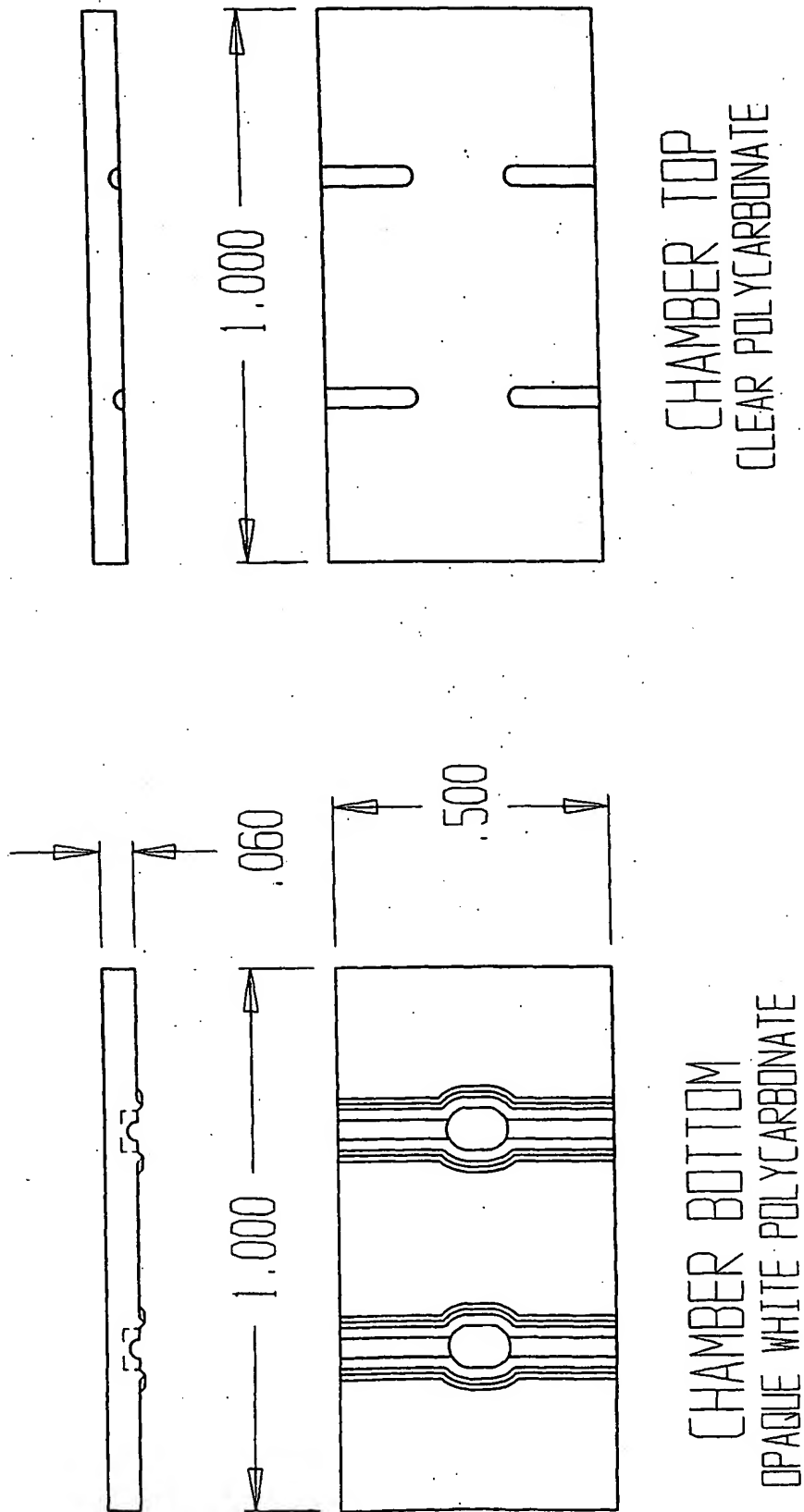
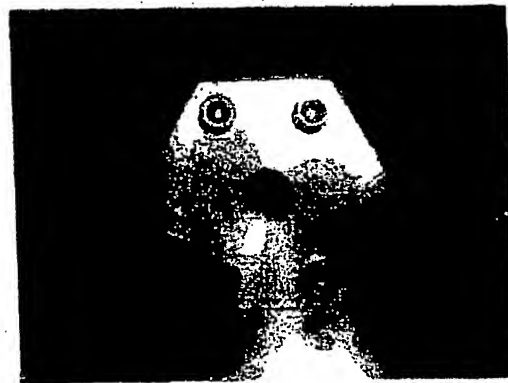
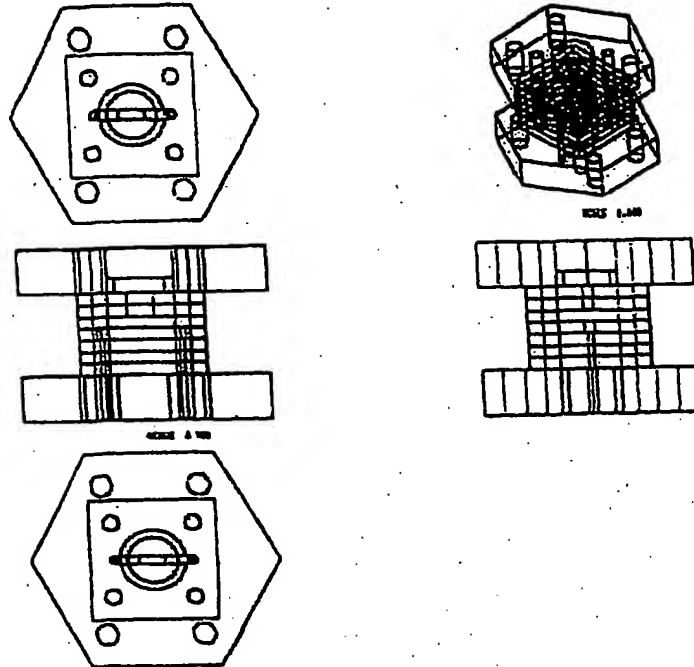


FIG. 25A





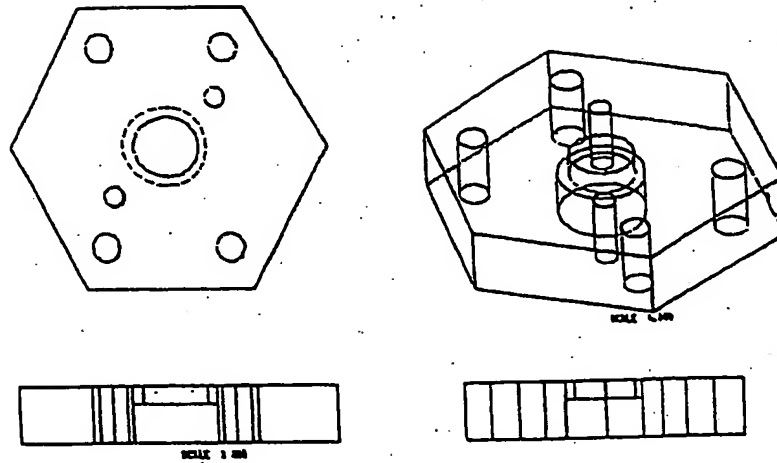


FIG. 27

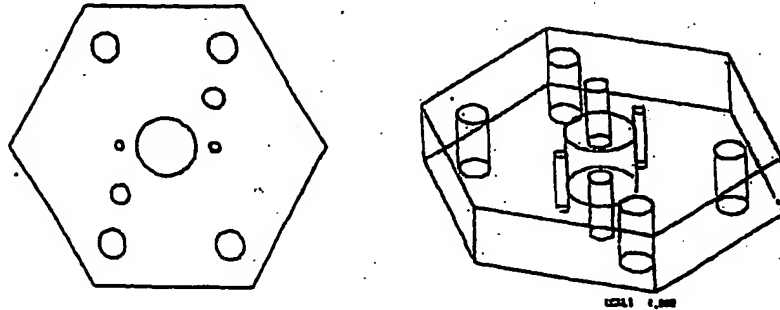
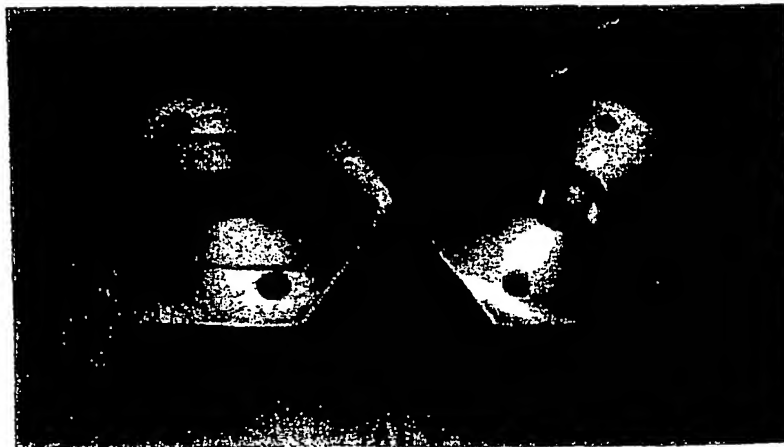


FIG. 28A



FIG. 28B



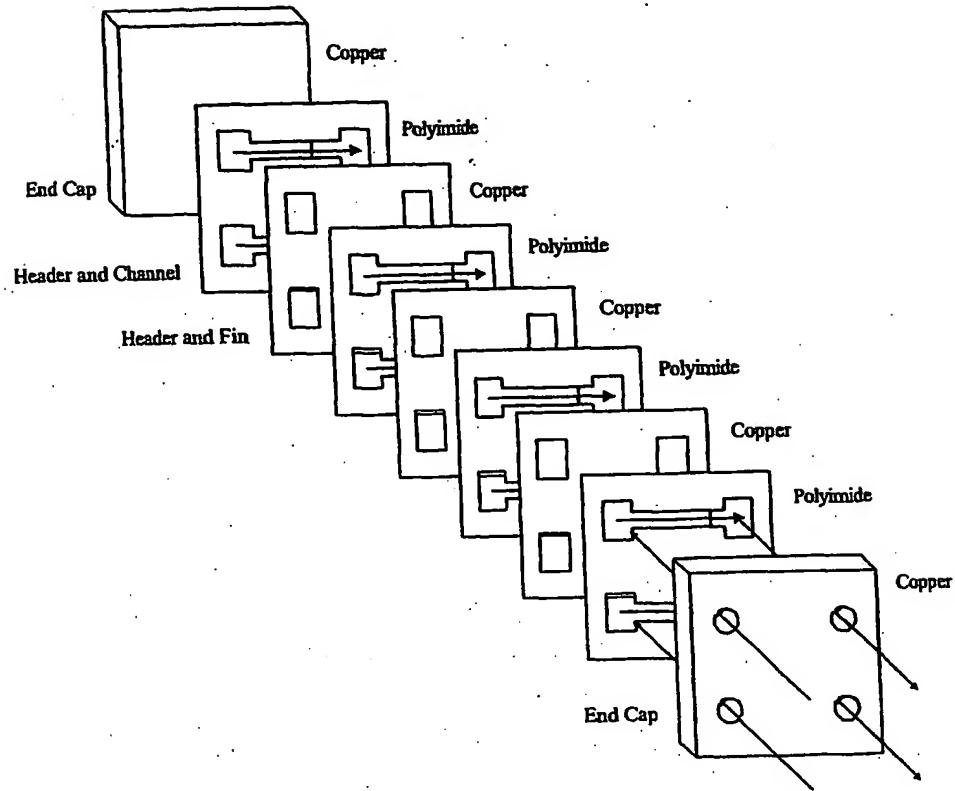


FIG. 29

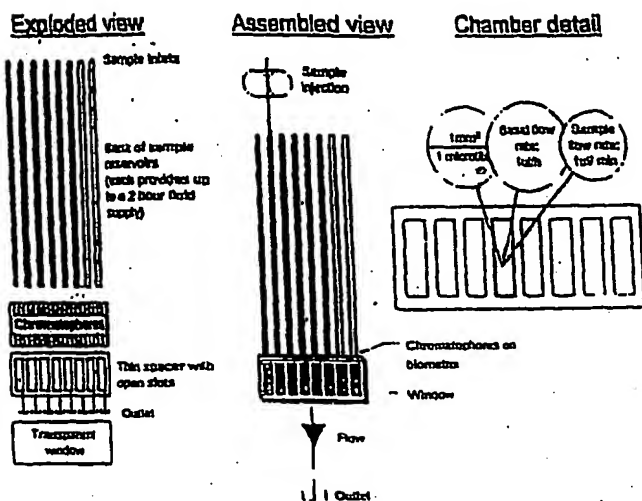


FIG. 30A

FIG. 30B

FIG. 30C

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Our Ref. No. 245-67734
For: METHOD AND SYSTEM FOR
CLASSIFYING A SCENARIO
Inventor(s): Chaplen et al.
Express Mail Label: EV339206009US
Mailed: March 12, 2004

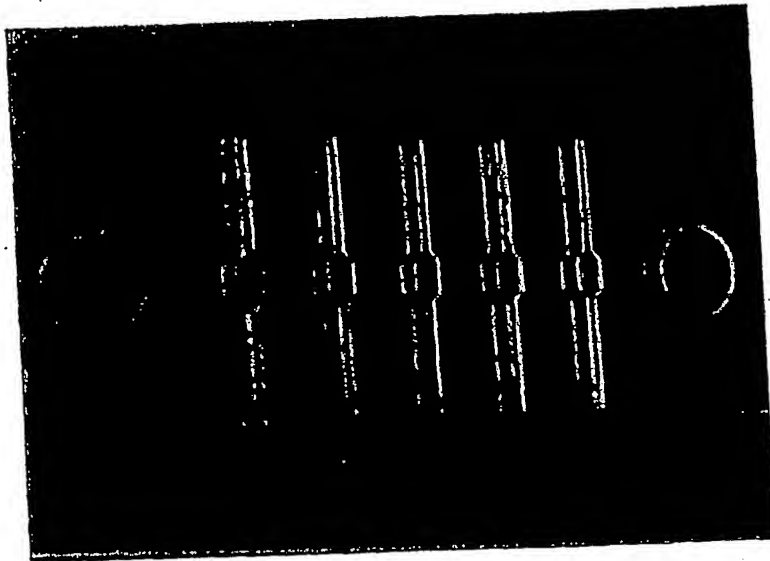


FIG. 31

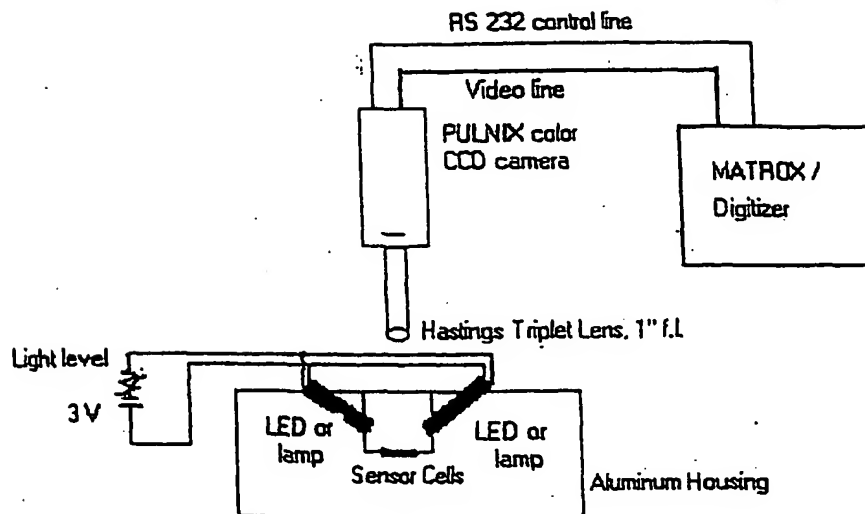
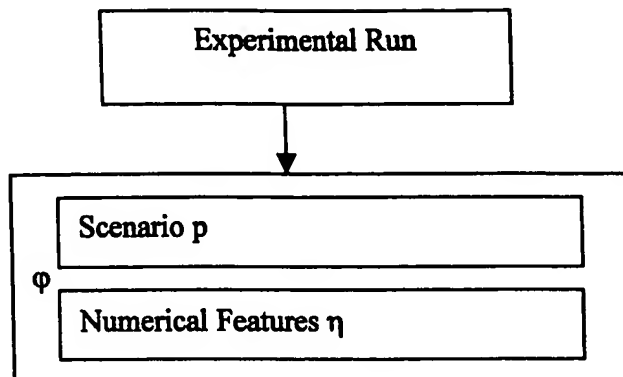
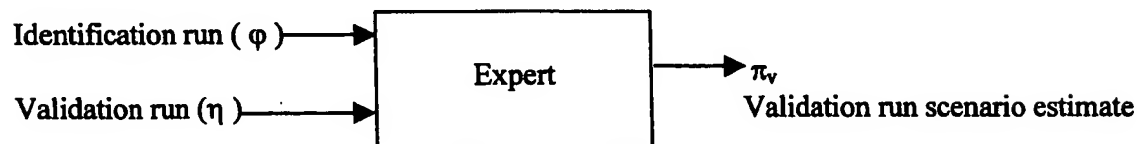


FIG. 32

Patent: Soft Classification Flowchart Version 1.0



Calibration run = experimental run with a known scenario.
 Calibration runs are divided into identification and validation runs.



Operational run = scenario is not known and only numerical features are available.

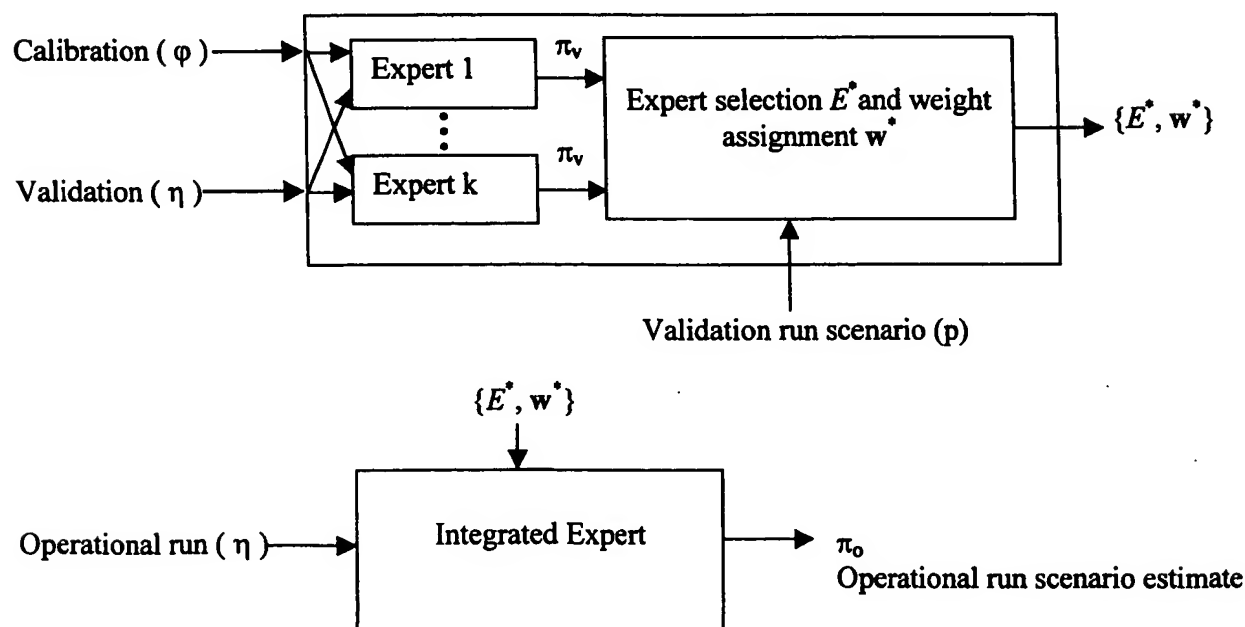


FIG. 33

FIG. 35A

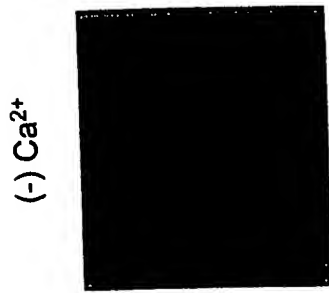
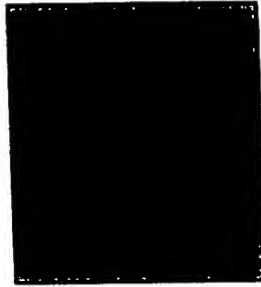
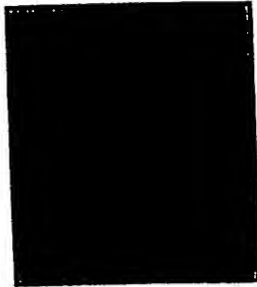


FIG. 35B



(+) Ca^{2+}



Before

After 10nM
Norepinephrine

FIG. 34A

FIG. 34B

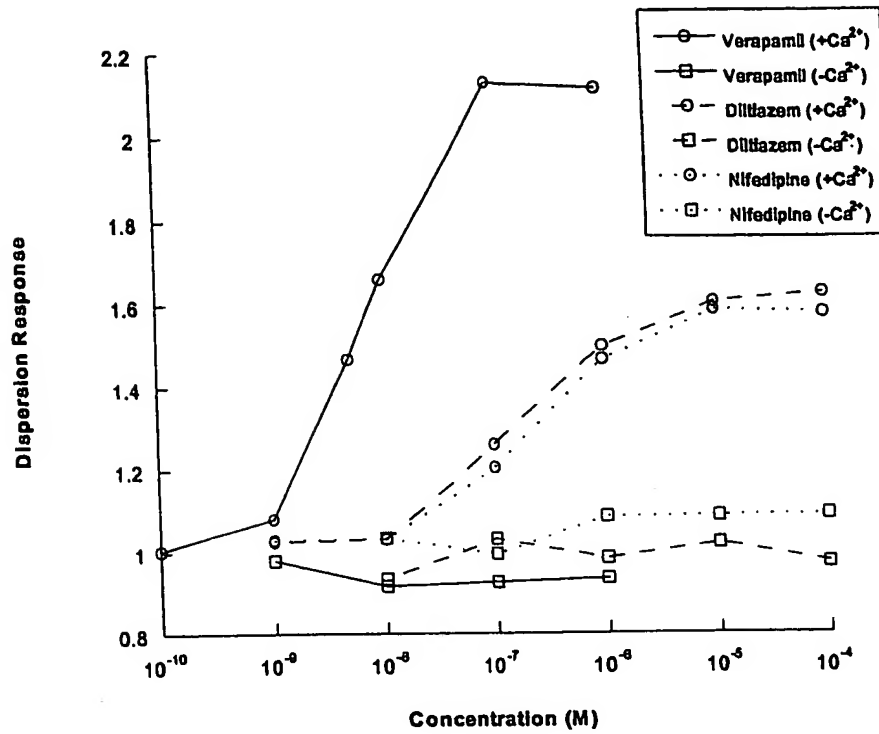


FIG. 36

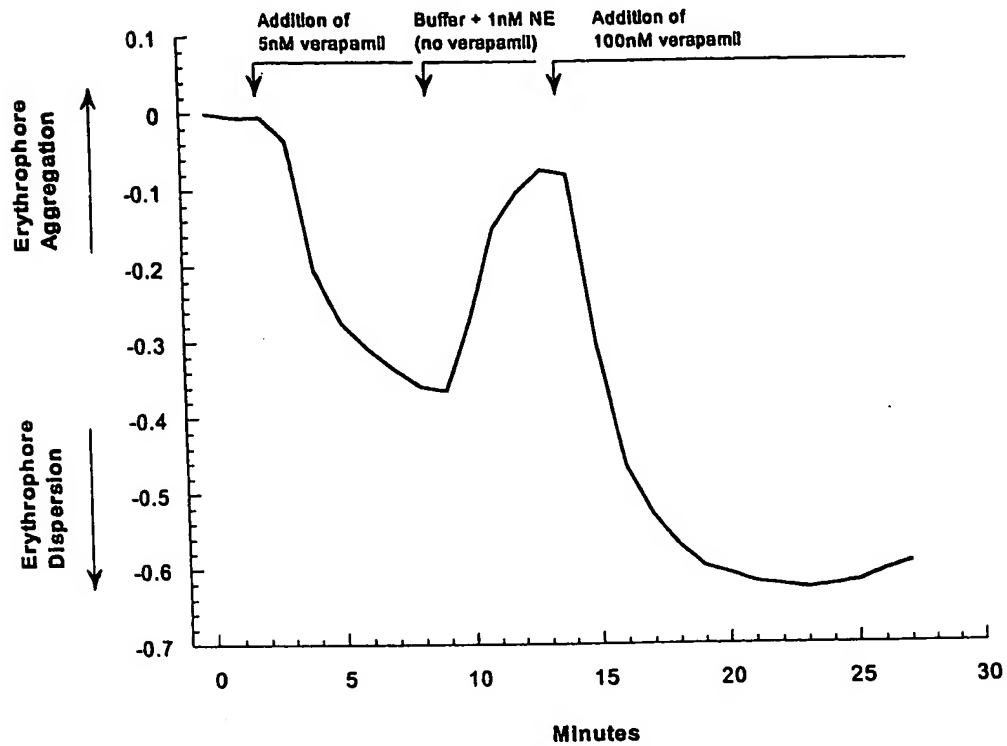


FIG. 37

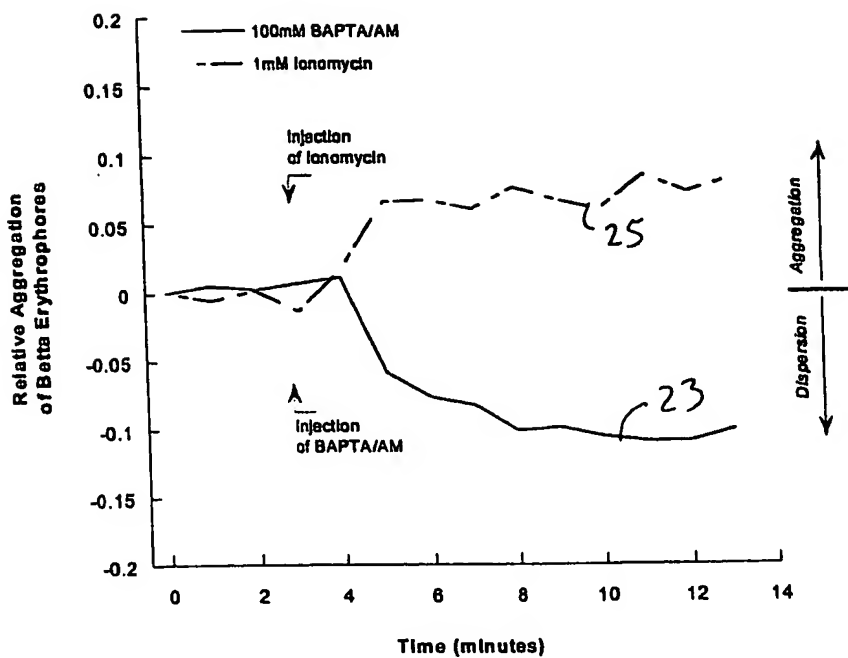


FIG. 38

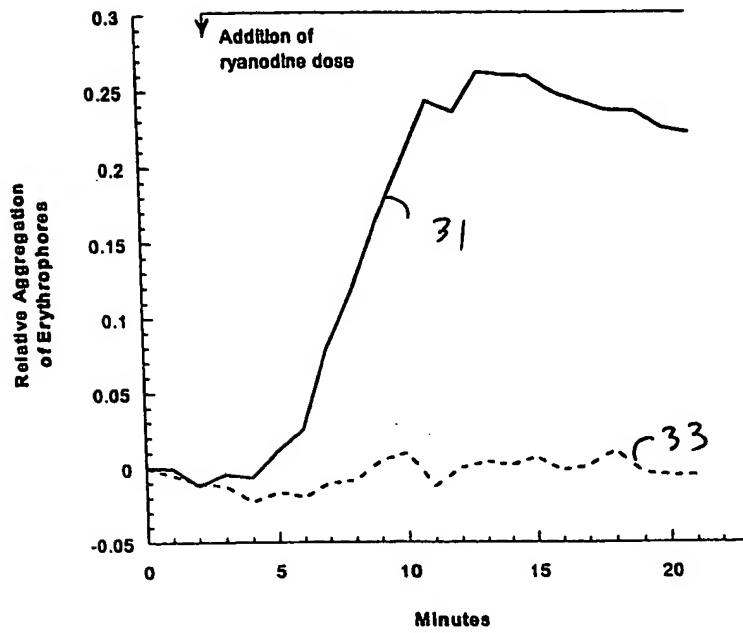


FIG. 39

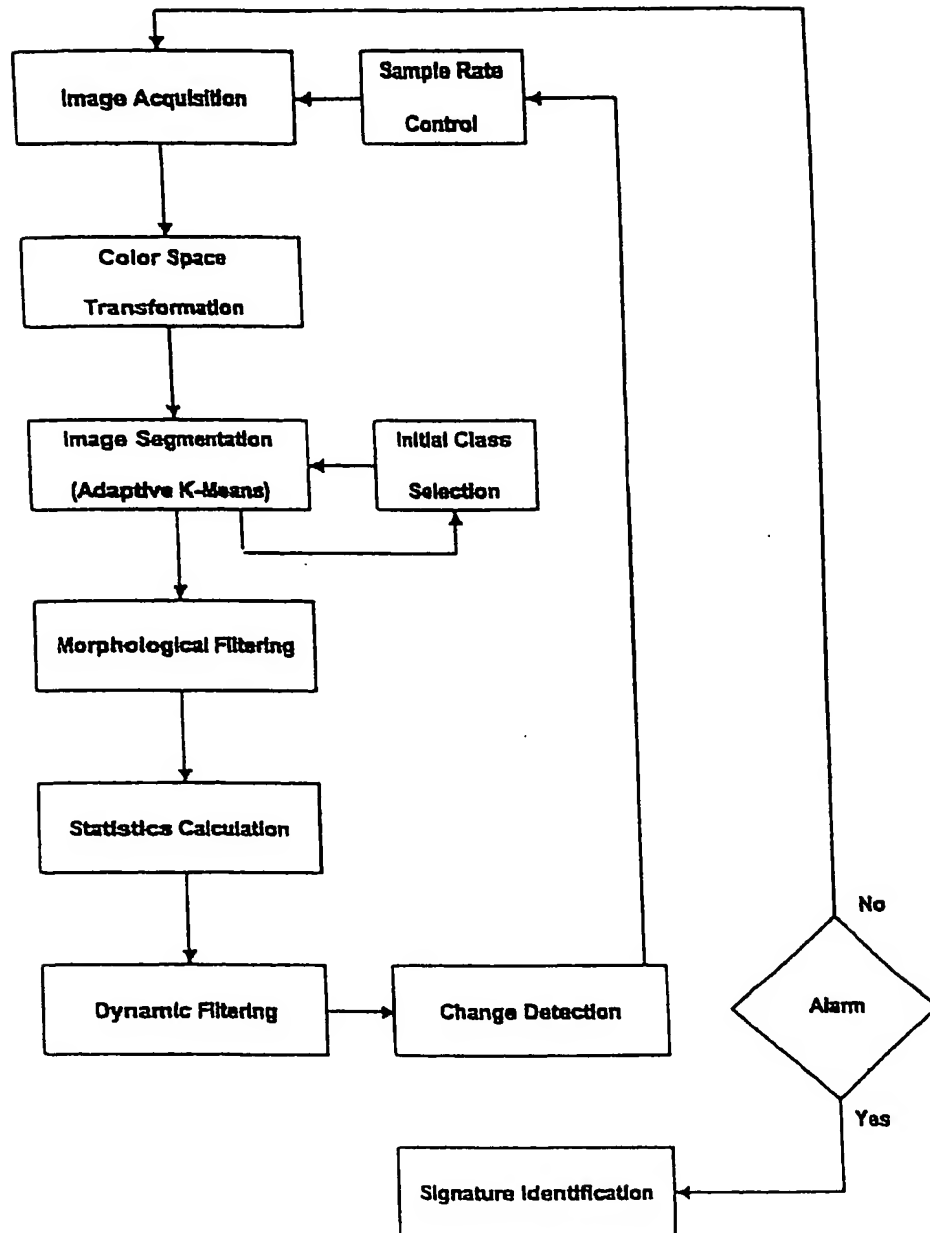


FIG. 40

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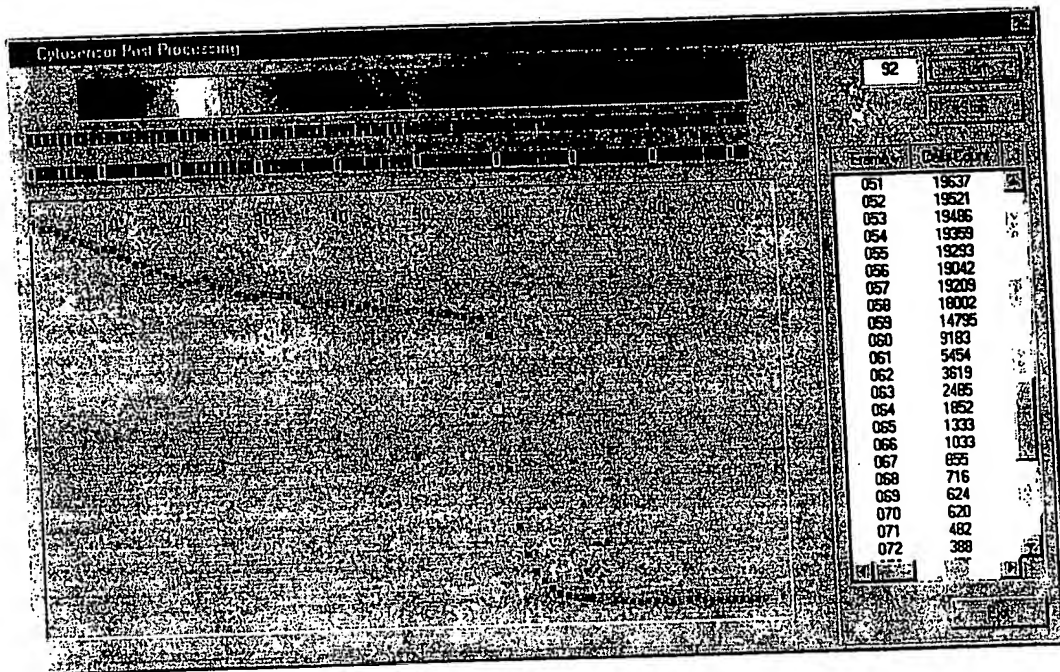


FIG. 41

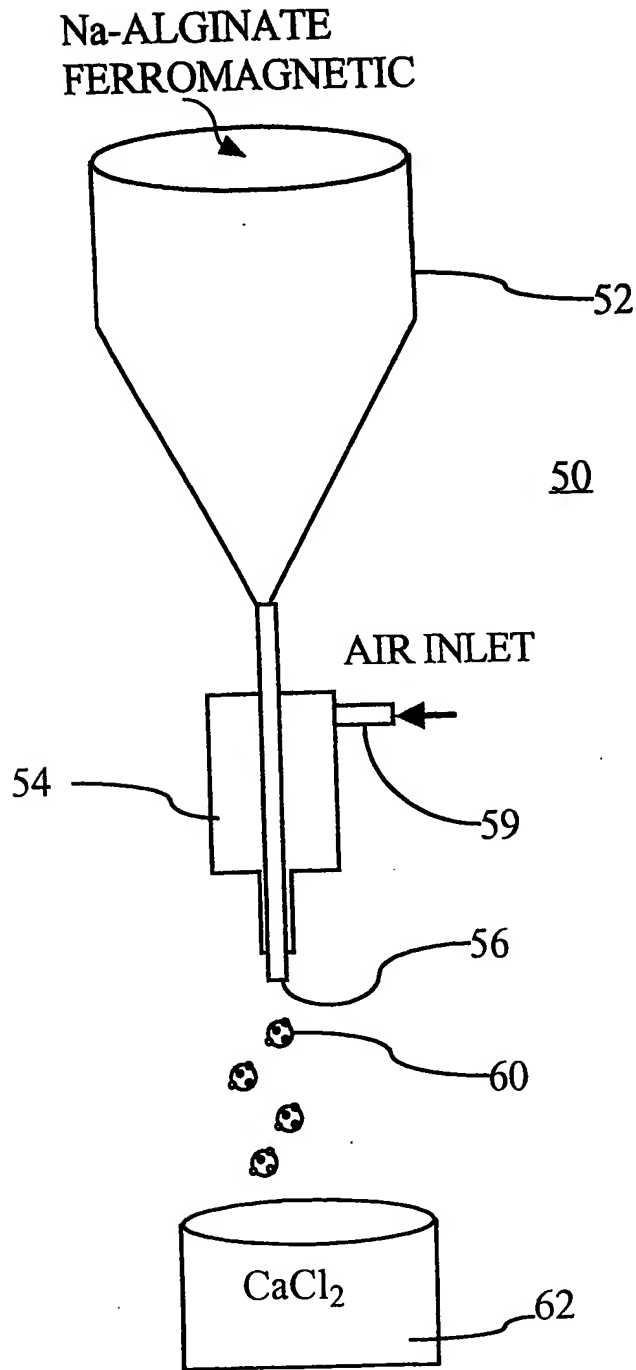


FIG. 42

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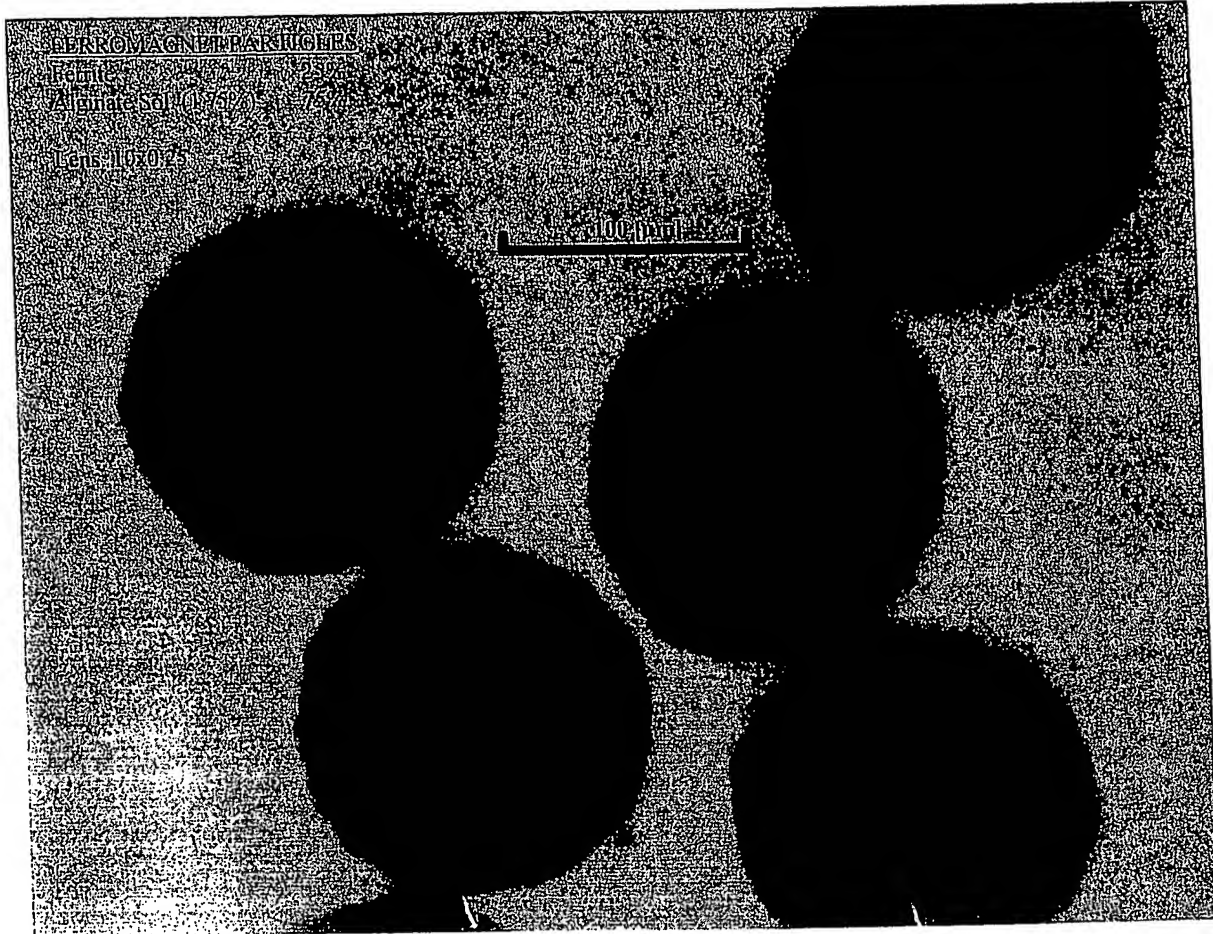


FIG. 43

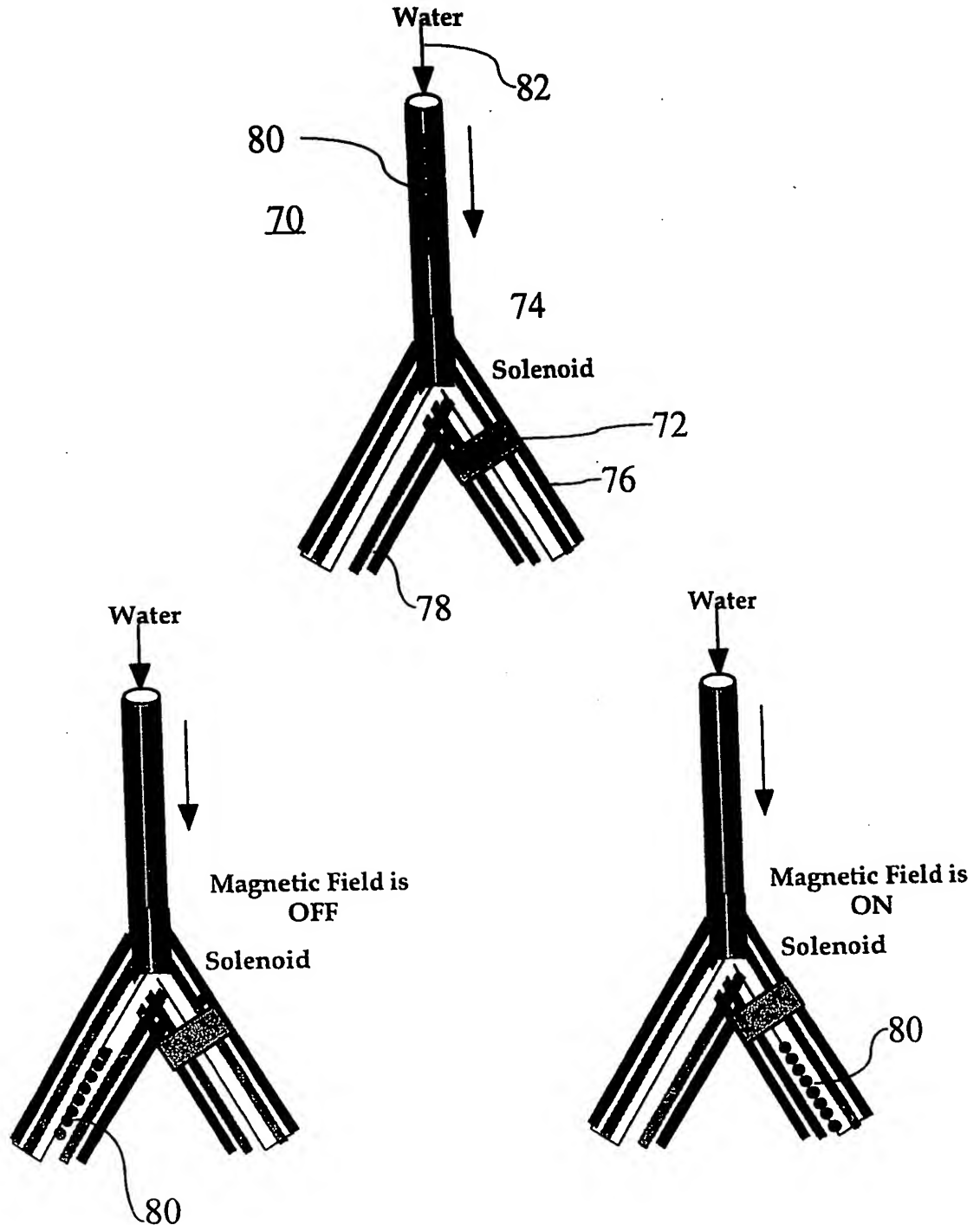


FIG. 44

FIG. 45

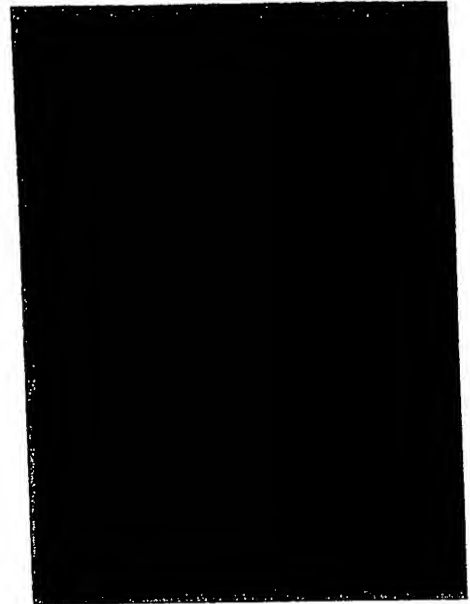
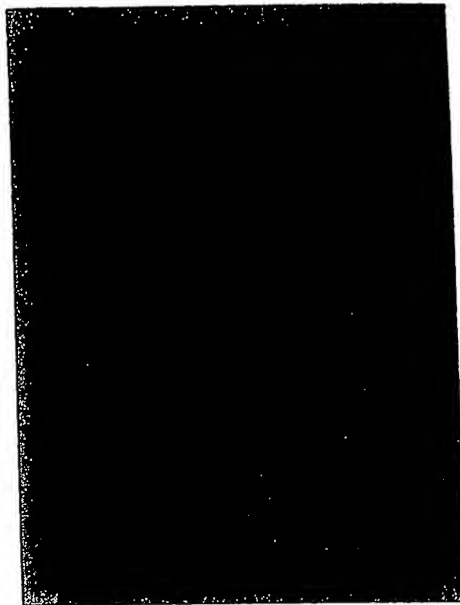


FIG. 46

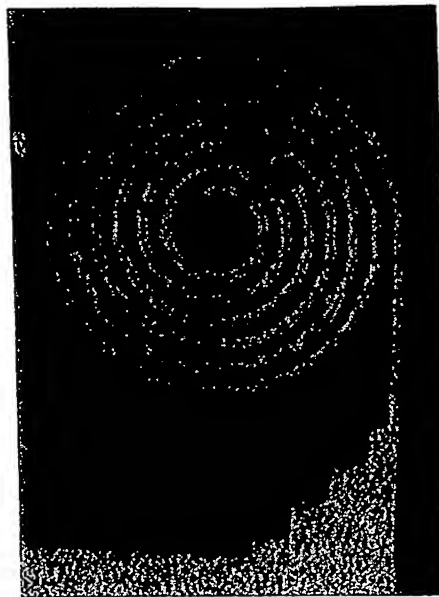


FIG. 47

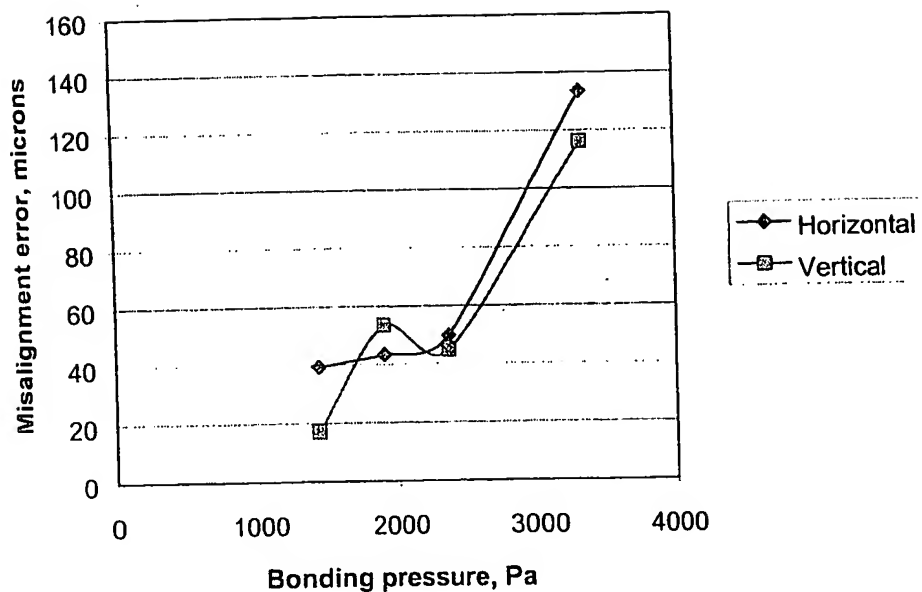
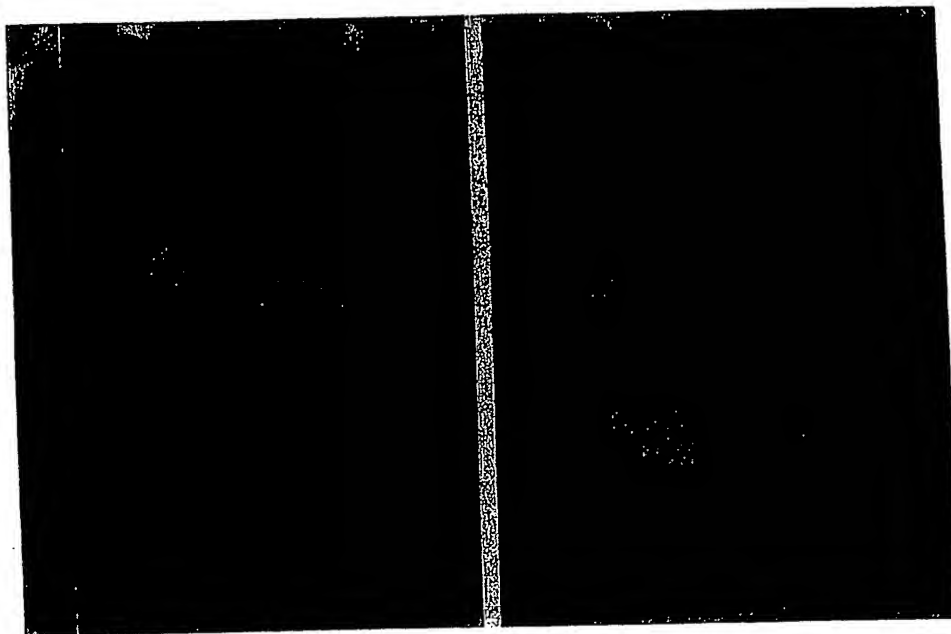


FIG. 48

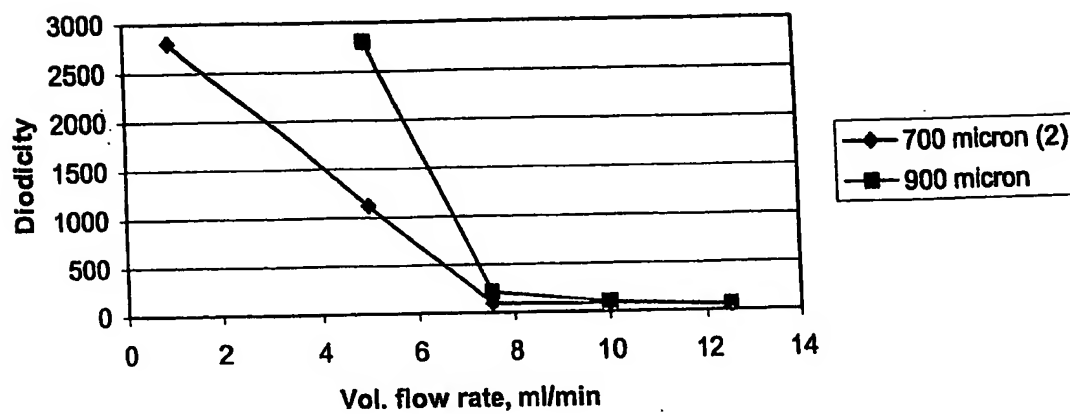


FIG. 49

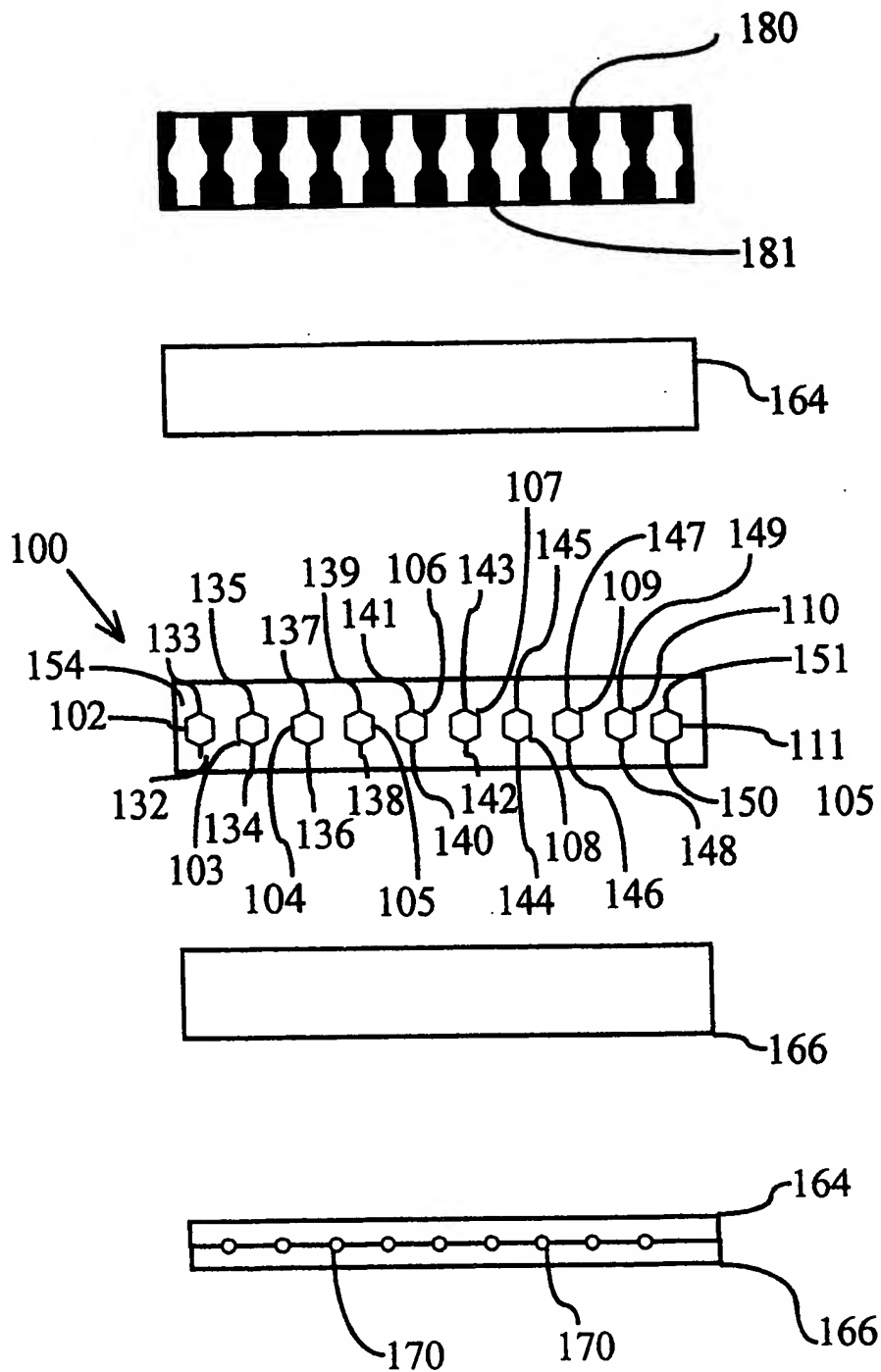


FIG. 50

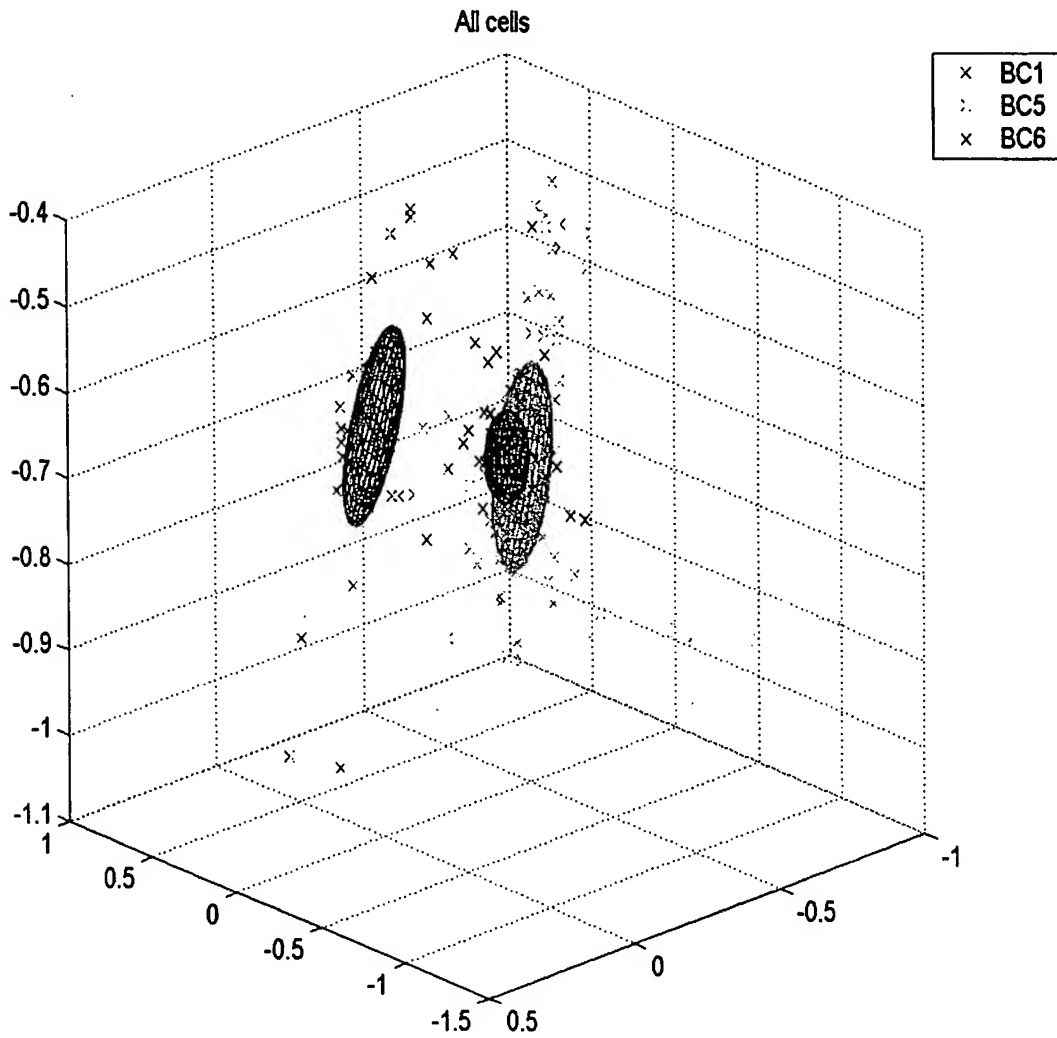


FIG. 51

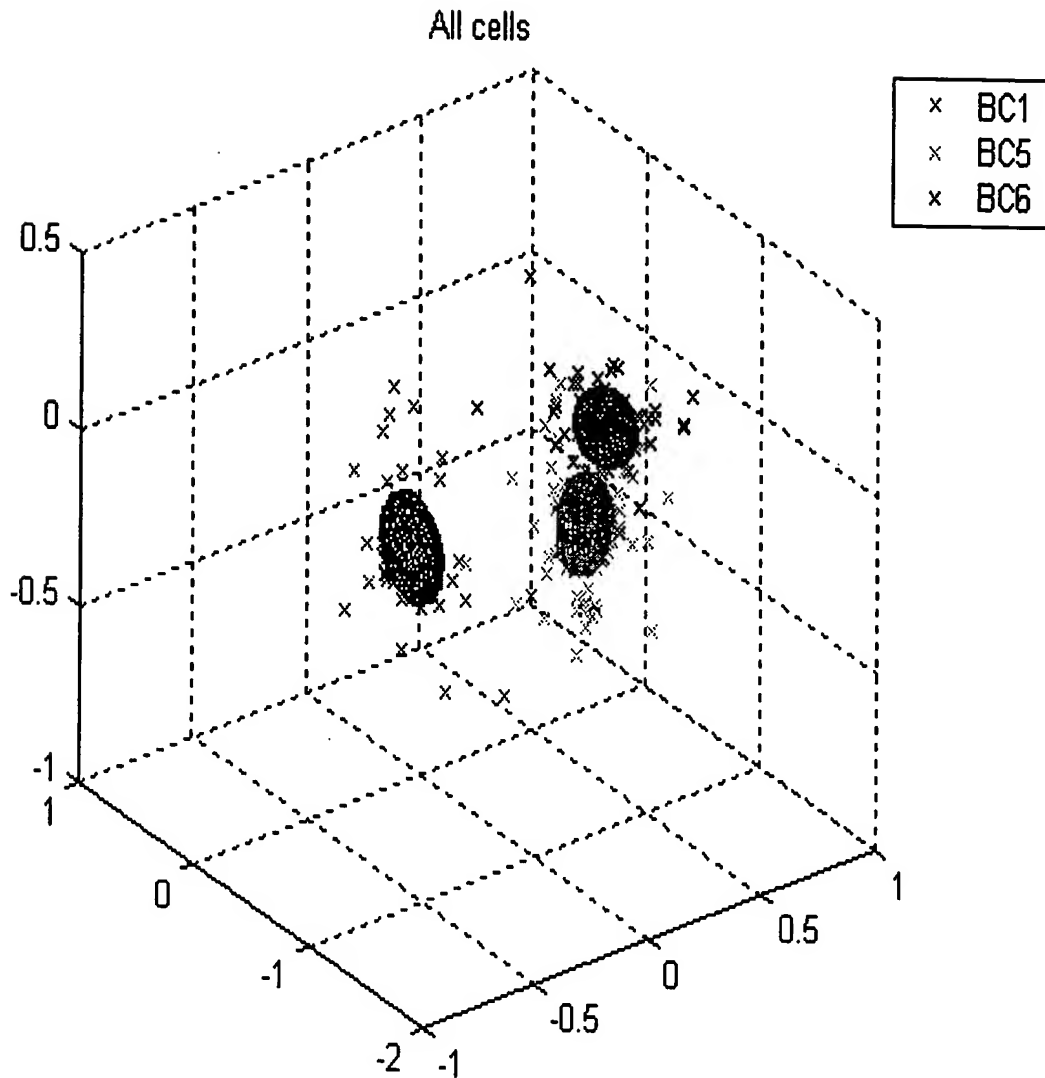


FIG. 52

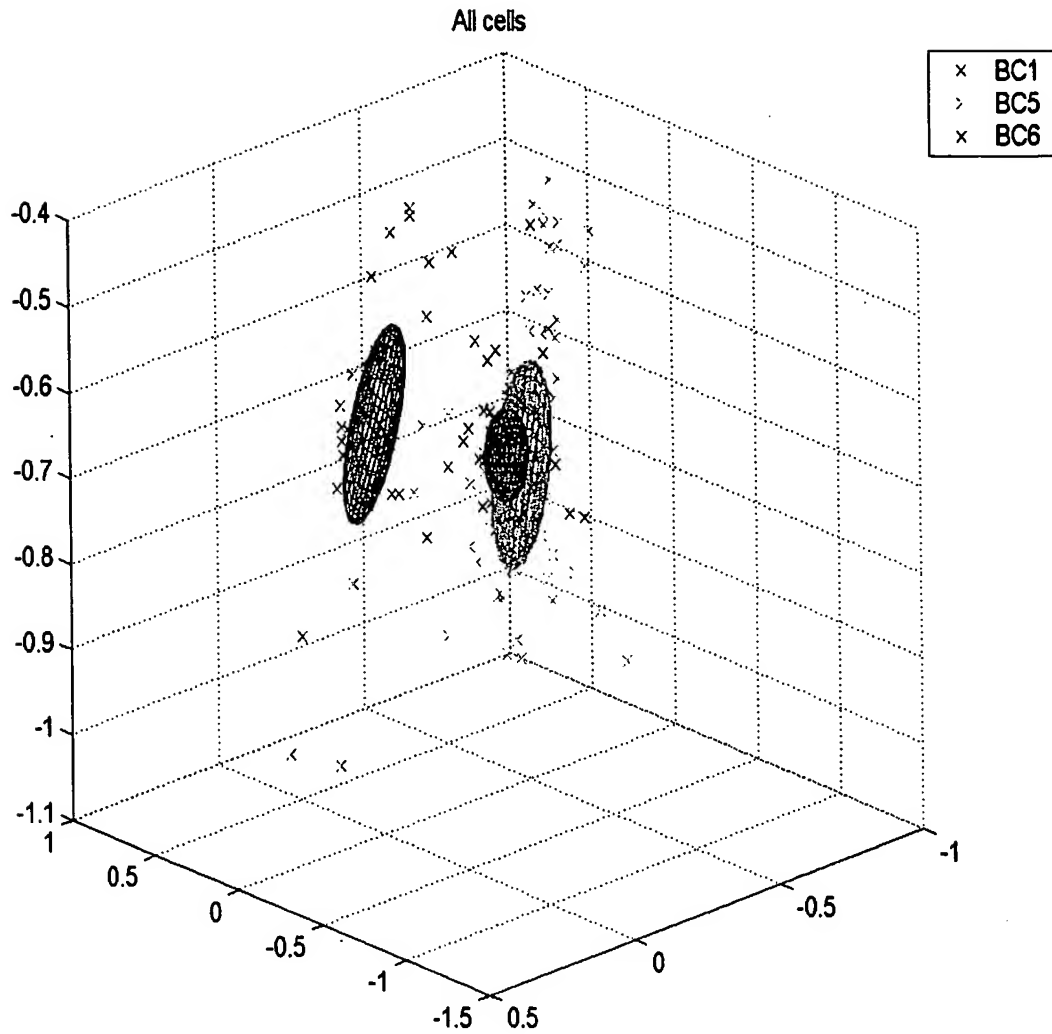


FIG. 53

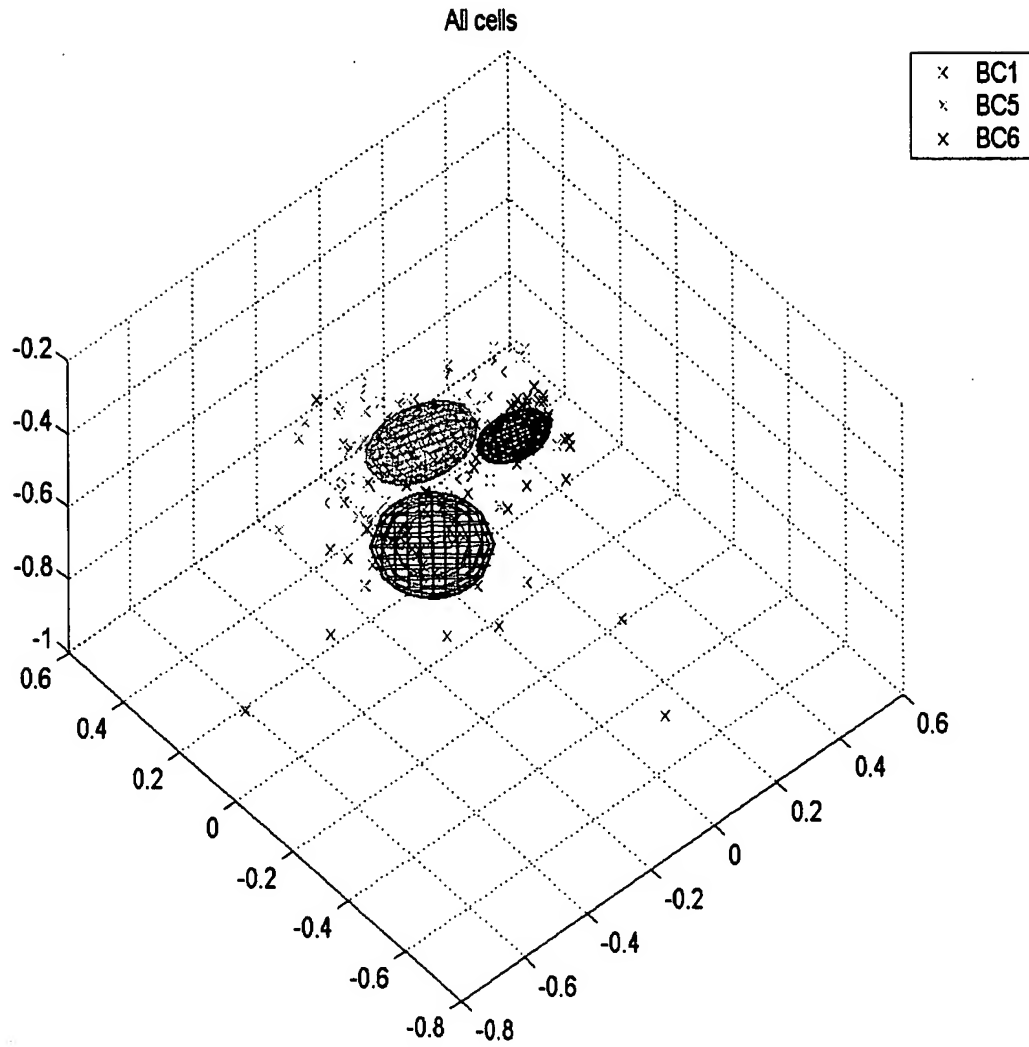


FIG. 54

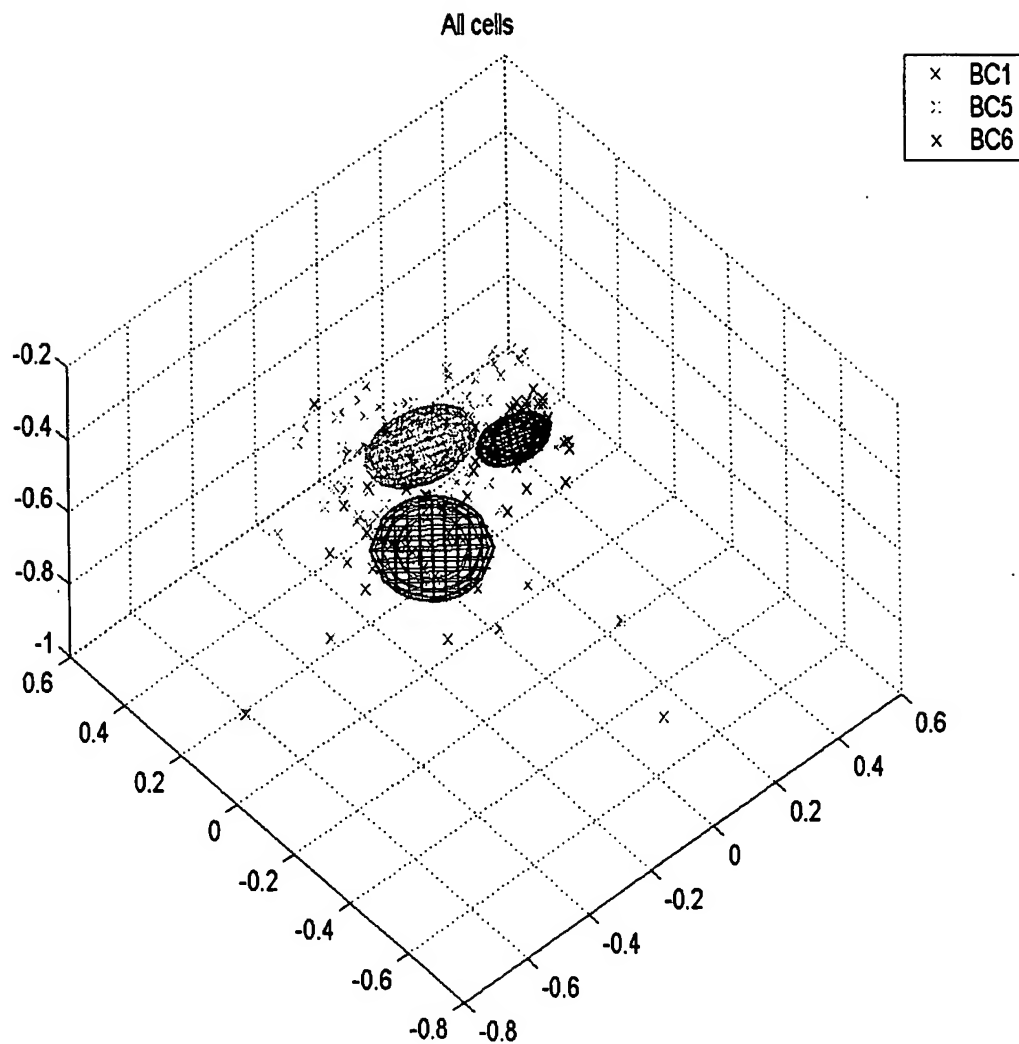


FIG. 55

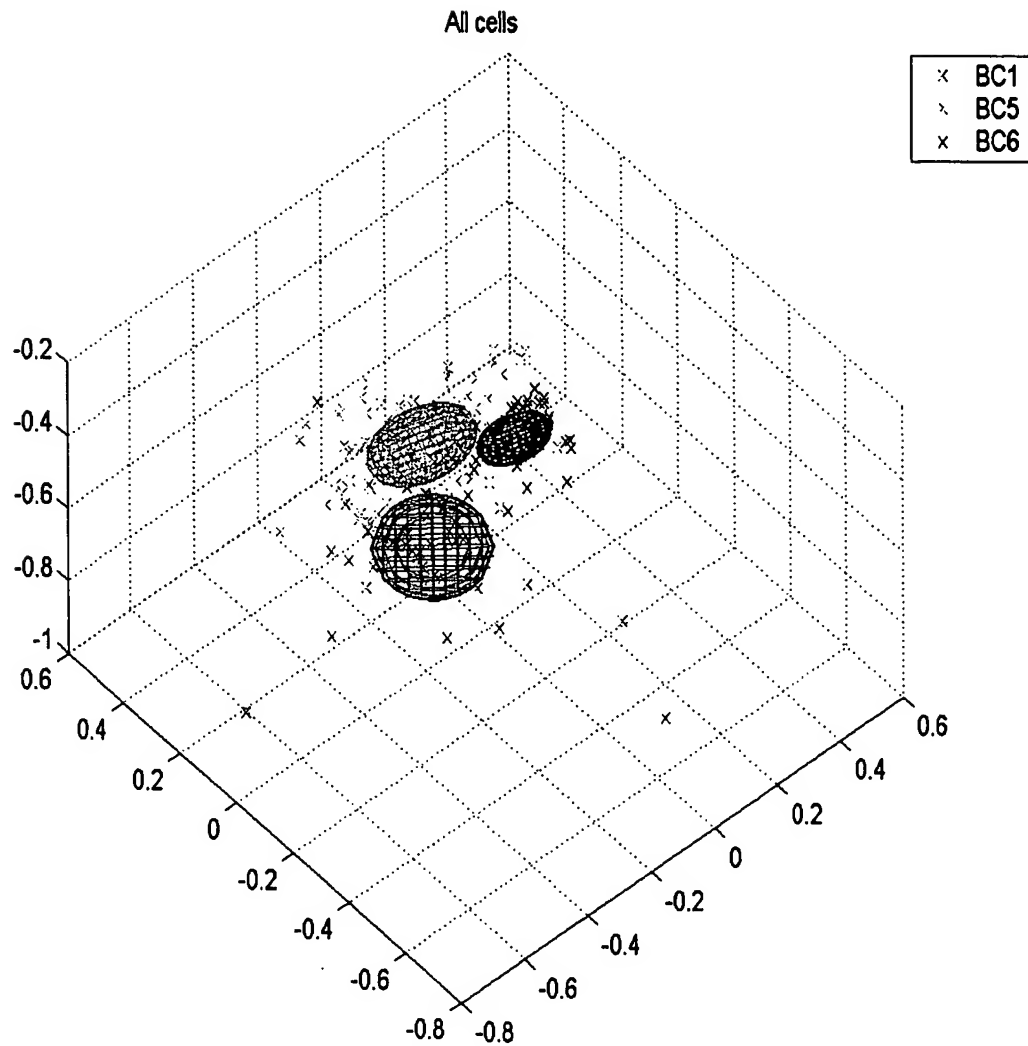


FIG. 56

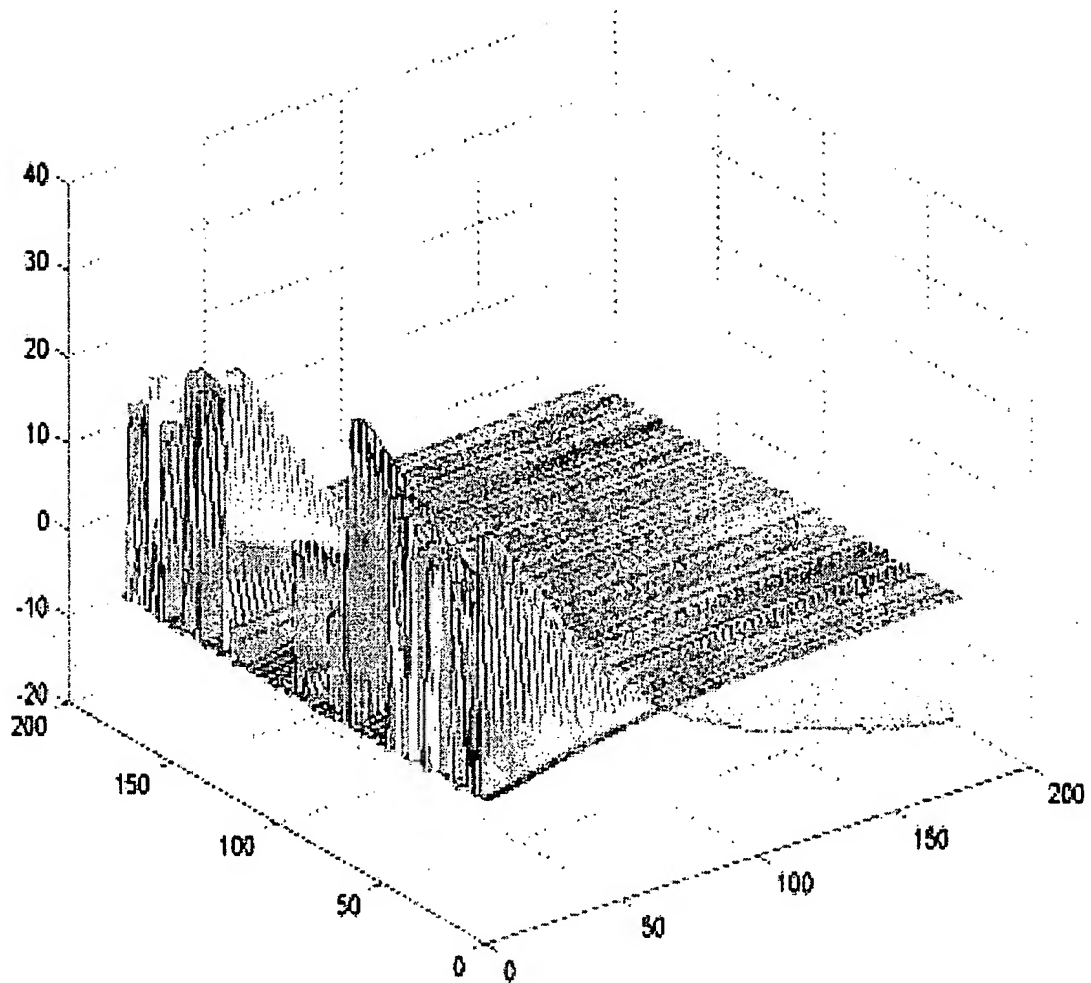


FIG. 57A

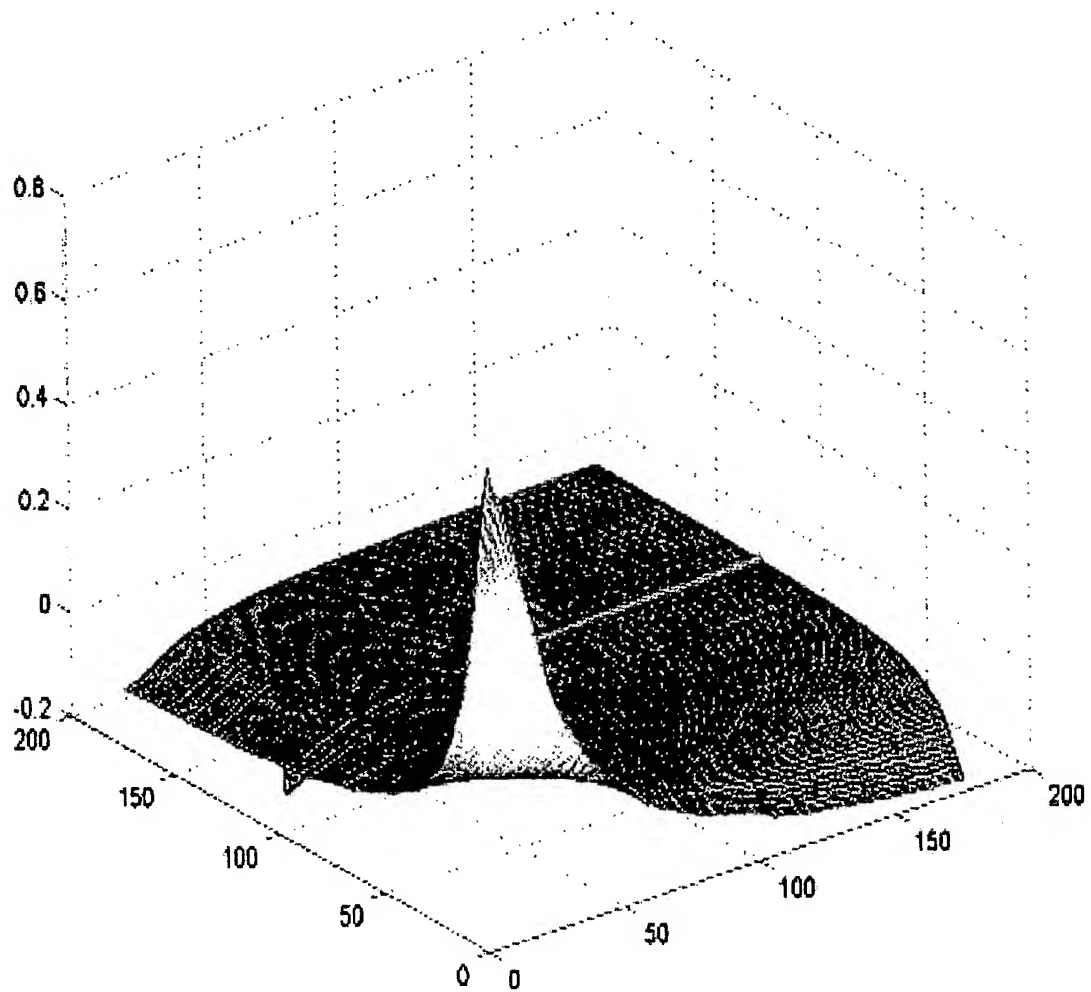


FIG. 57B

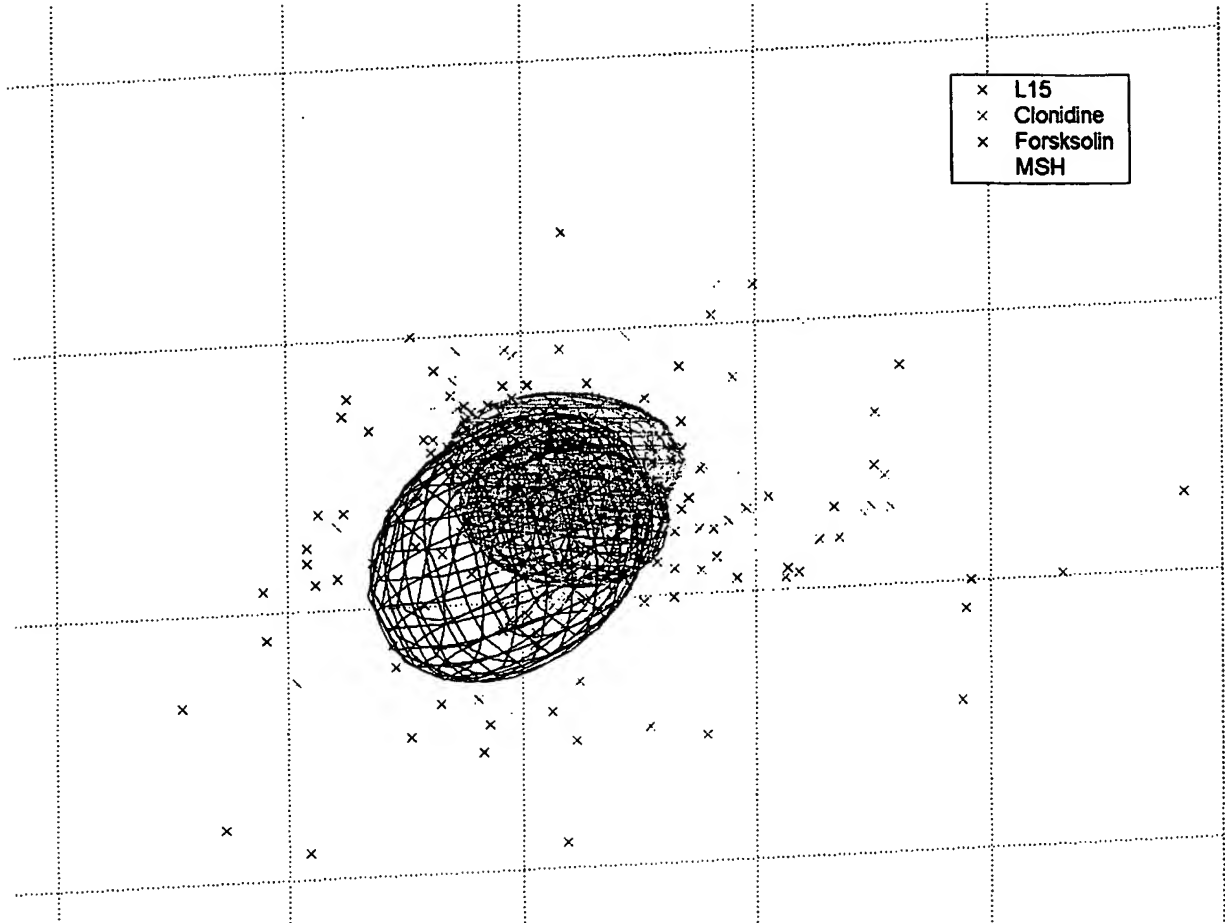


FIG. 58

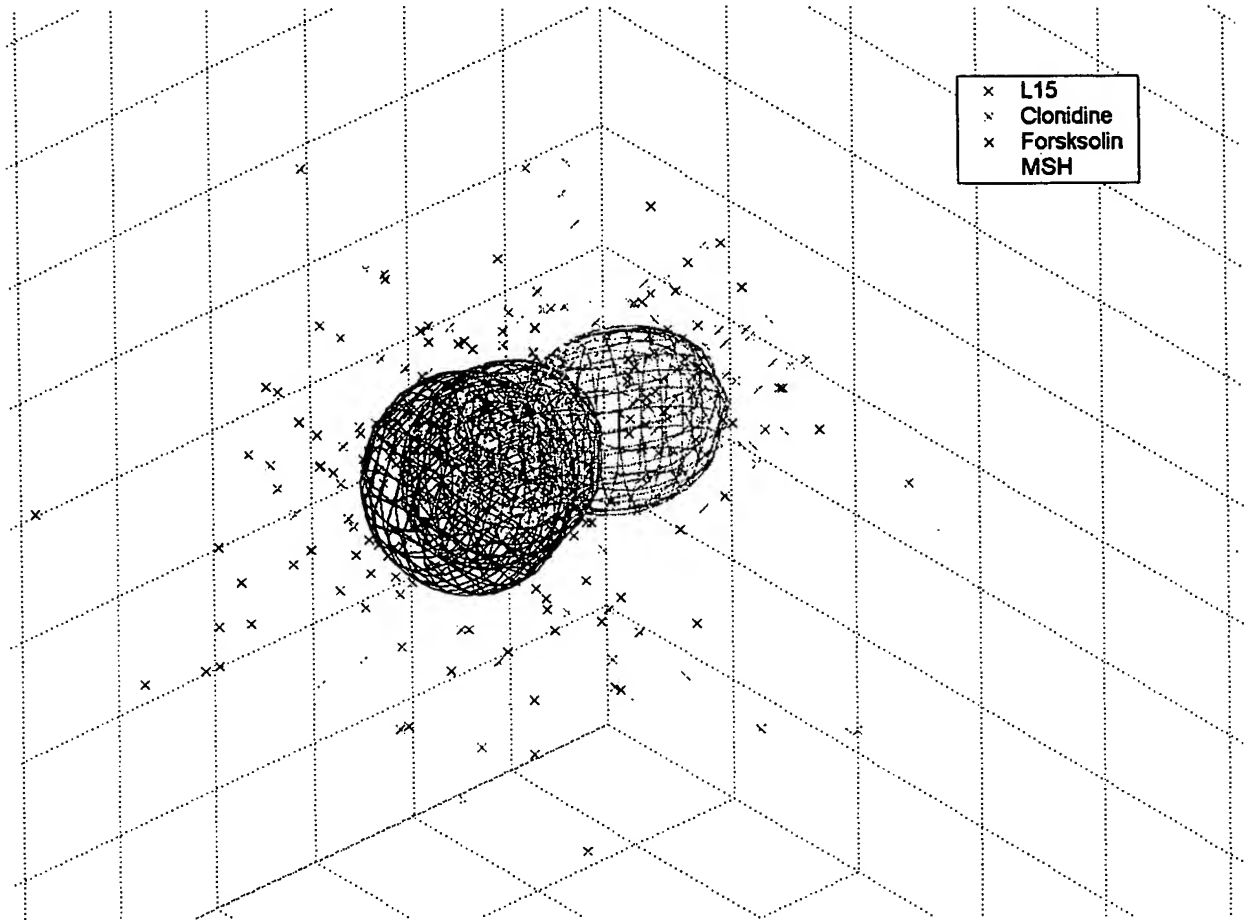


FIG. 59

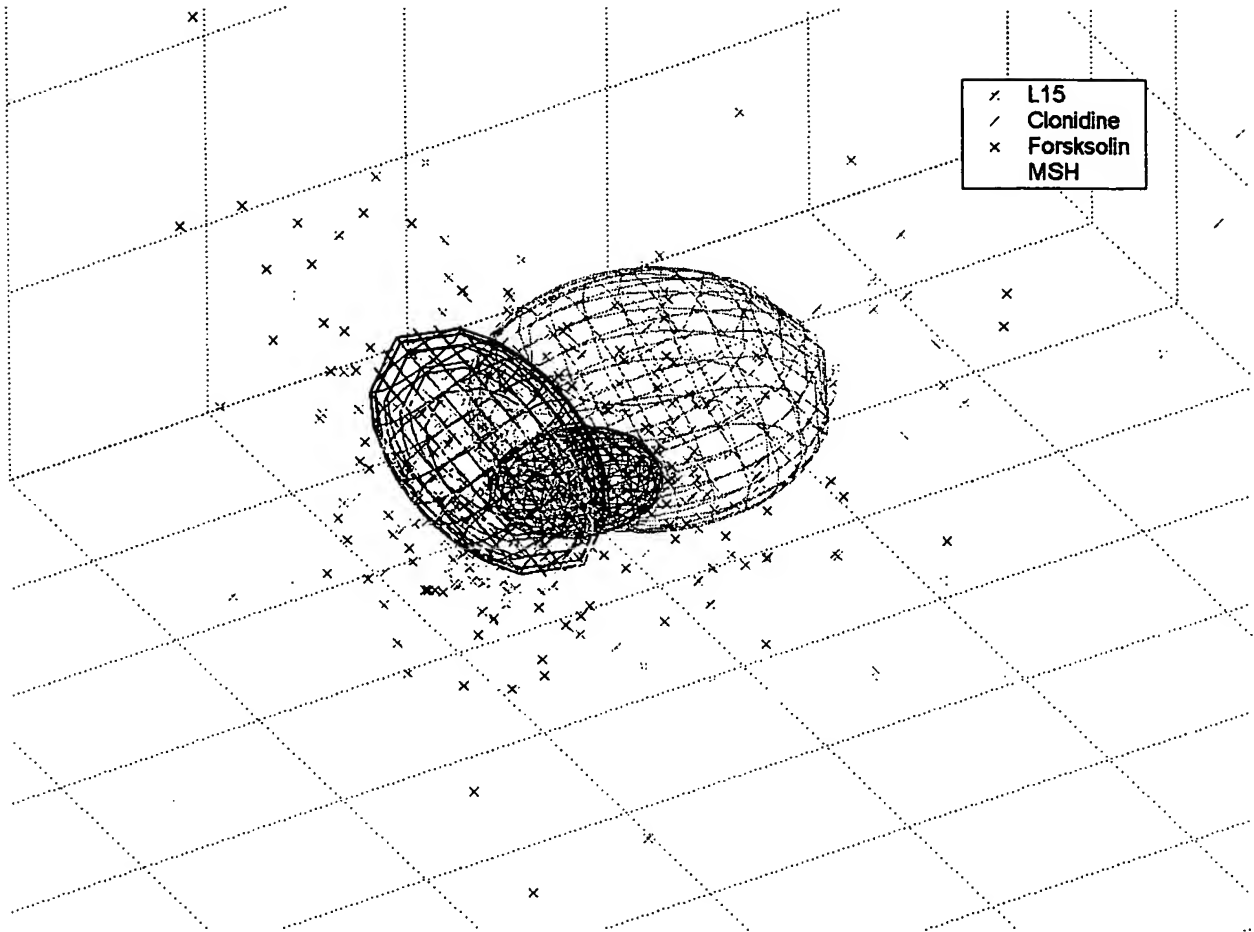


FIG. 60

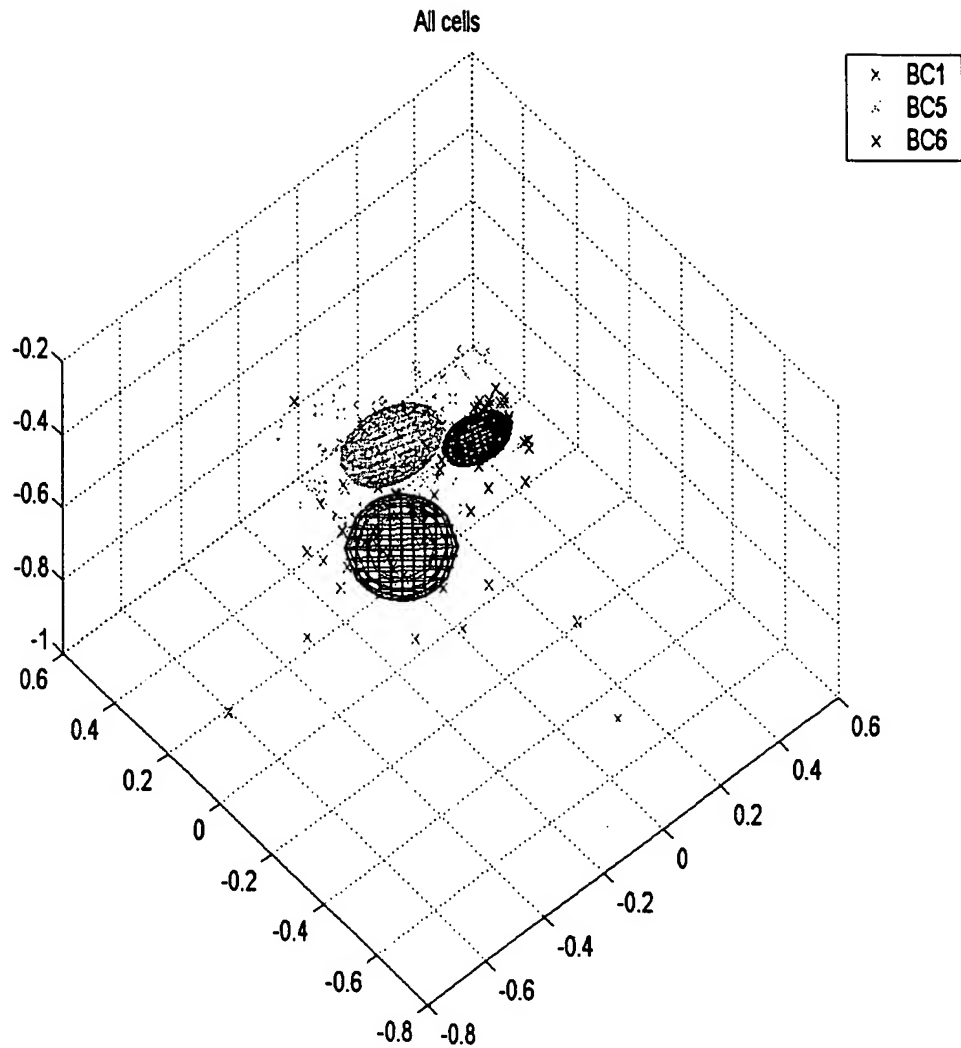


FIG. 61A

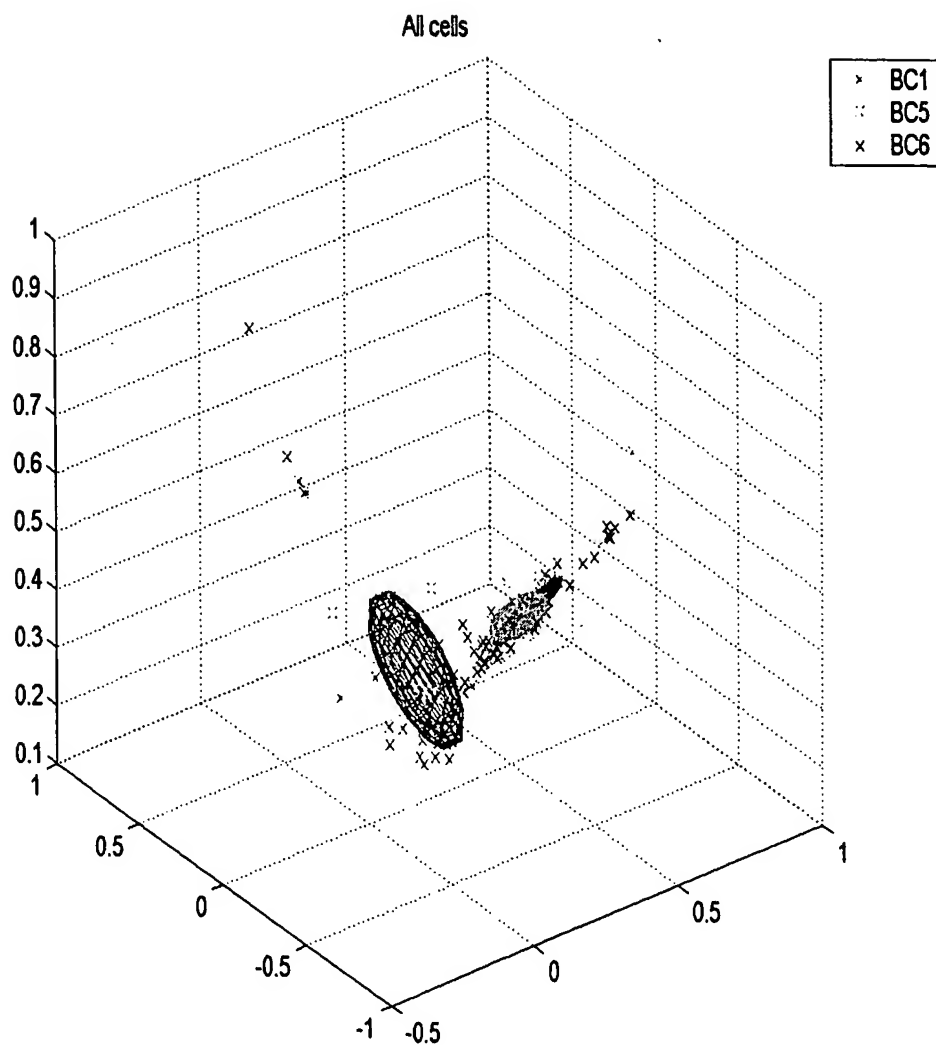


FIG. 61B

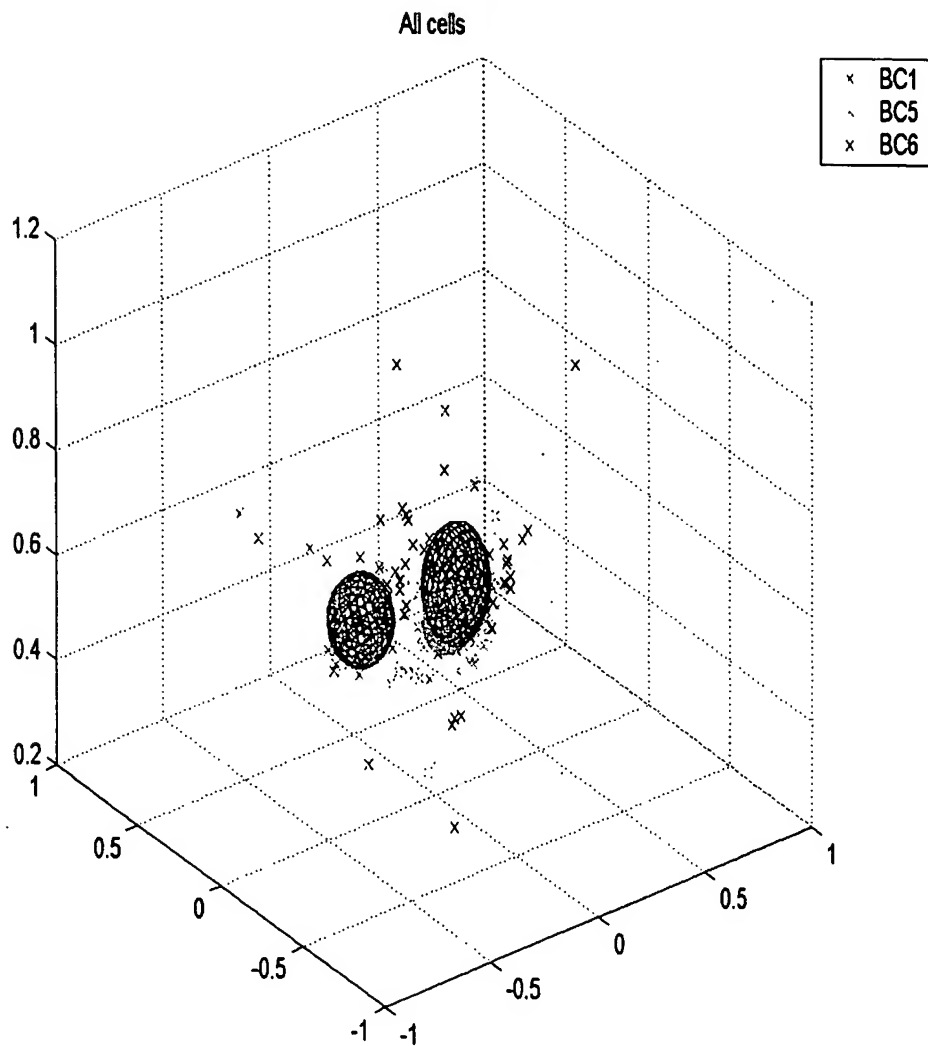


FIG. 61C

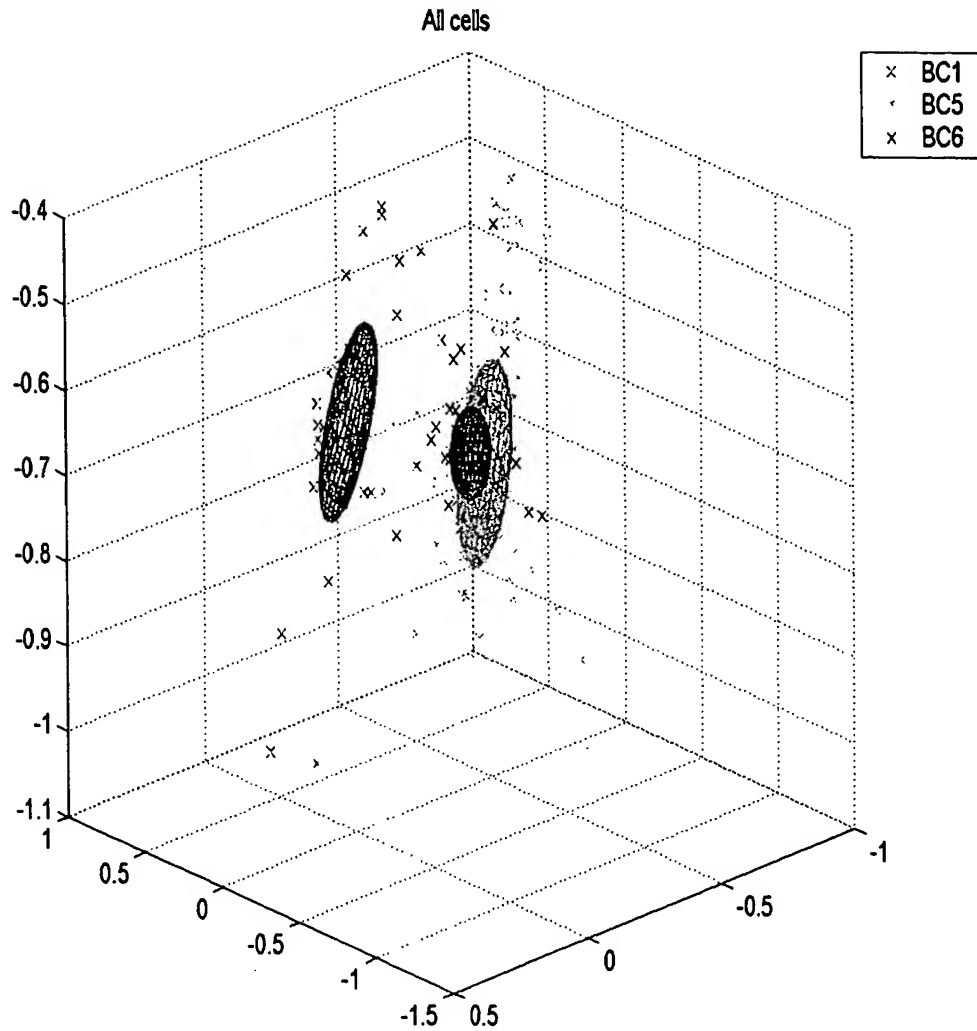


FIG. 61D

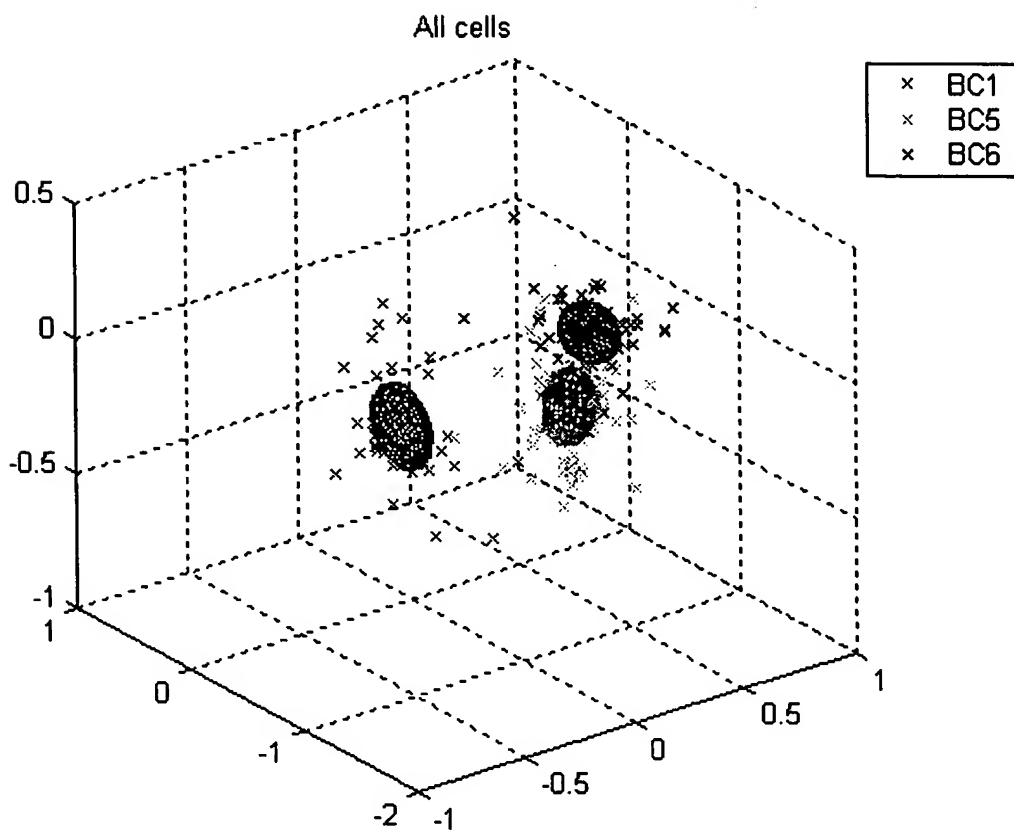


FIG. 62

FIG. 63C

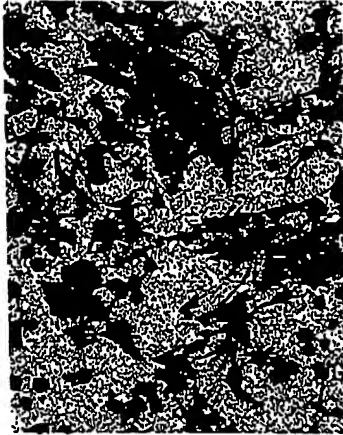


FIG. 63B

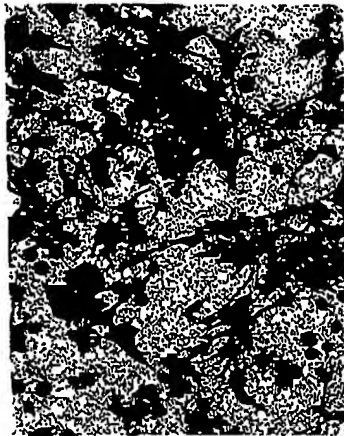


FIG. 63A

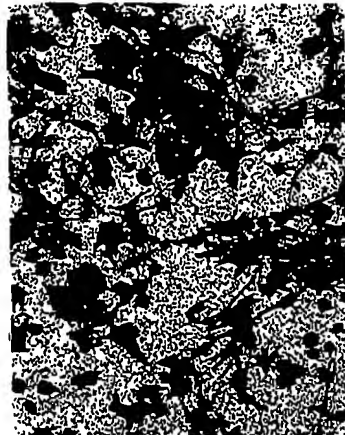


FIG. 63F

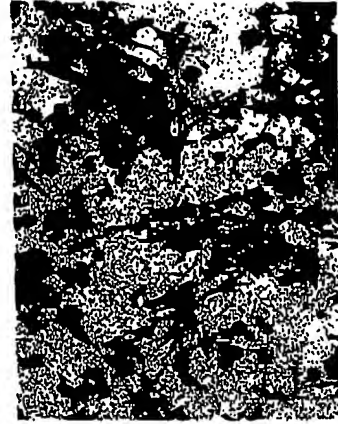


FIG. 63E

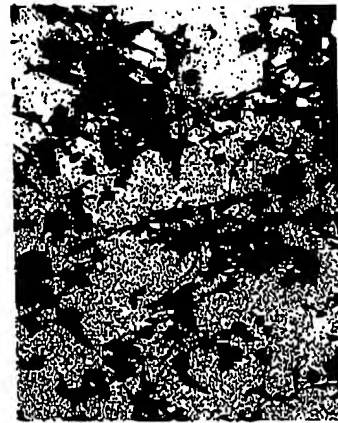
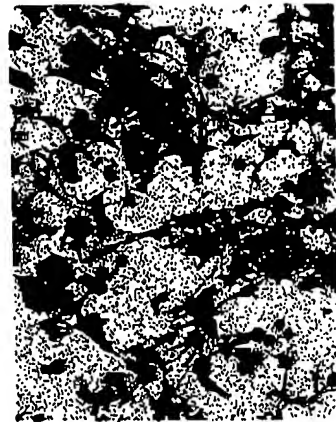


FIG. 63D



5

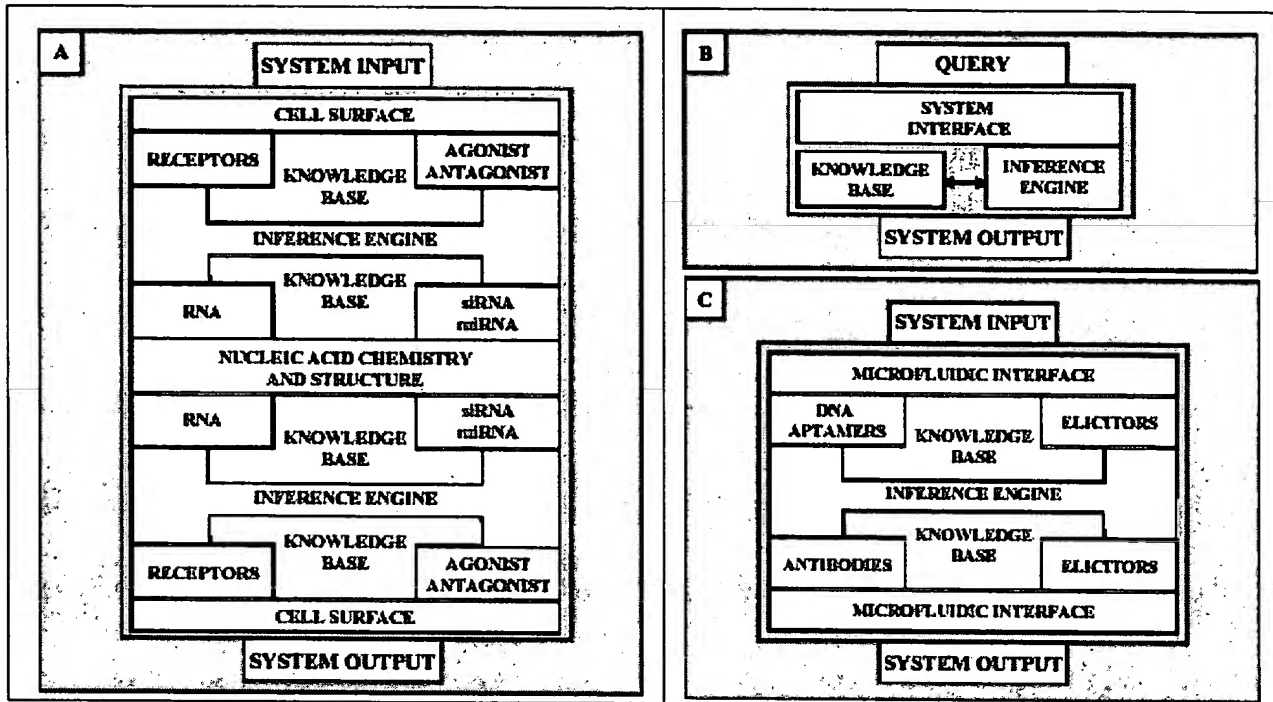


FIG. 64

5

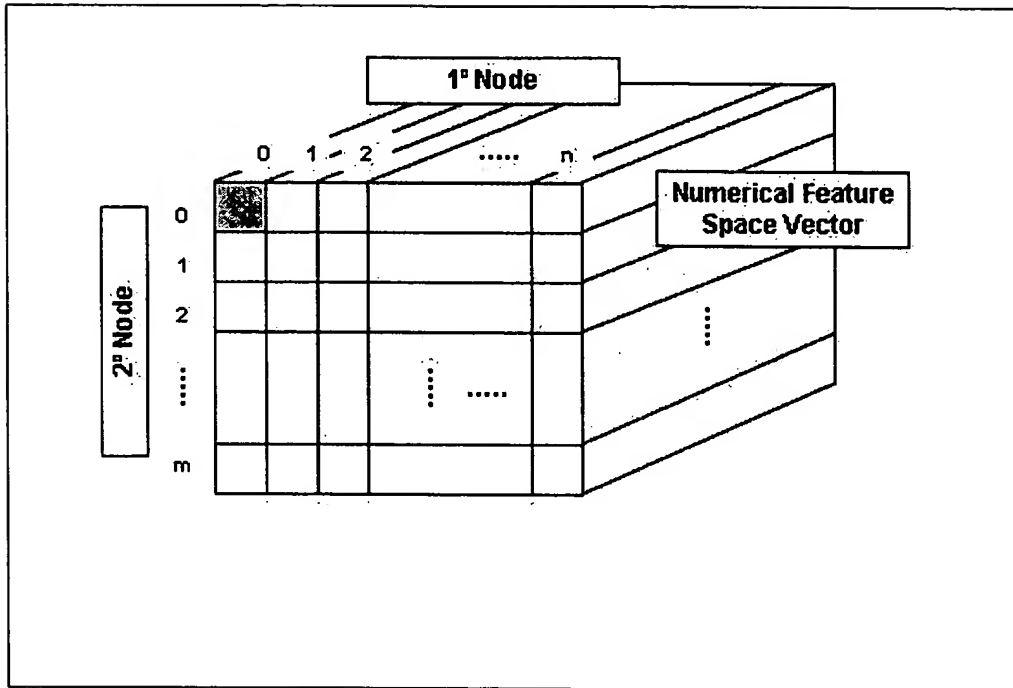


FIG. 65

A

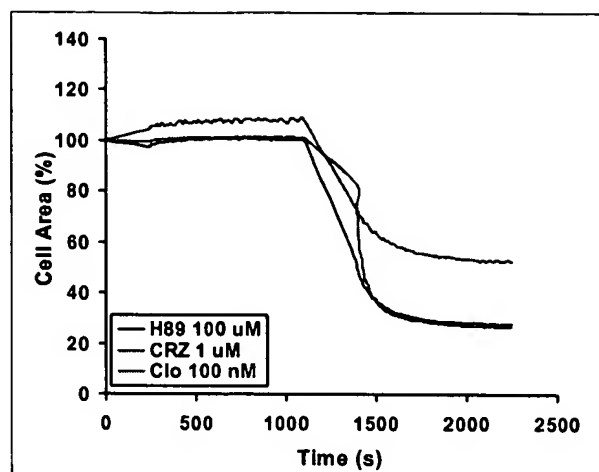


FIG. 66A

B

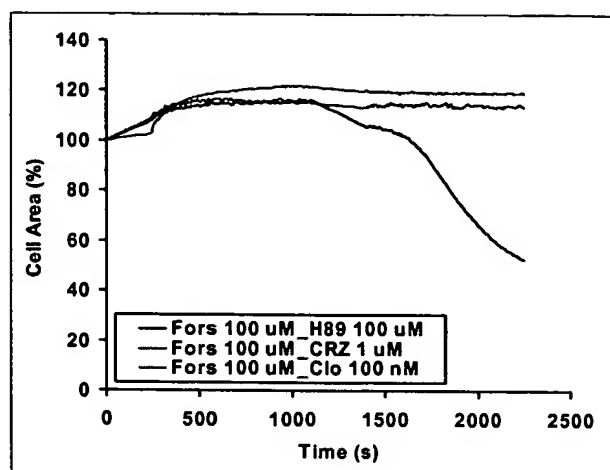


FIG. 66B

C

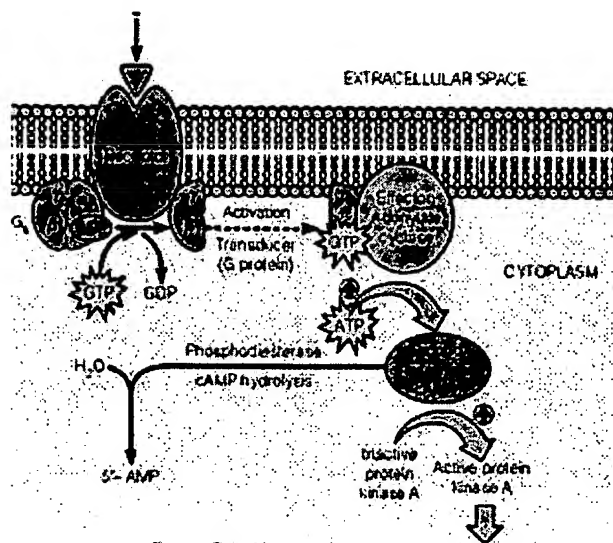


FIG. 66C

D

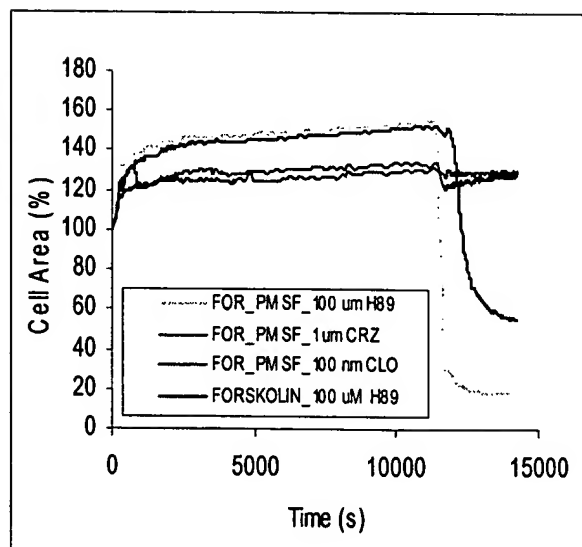


FIG. 66D

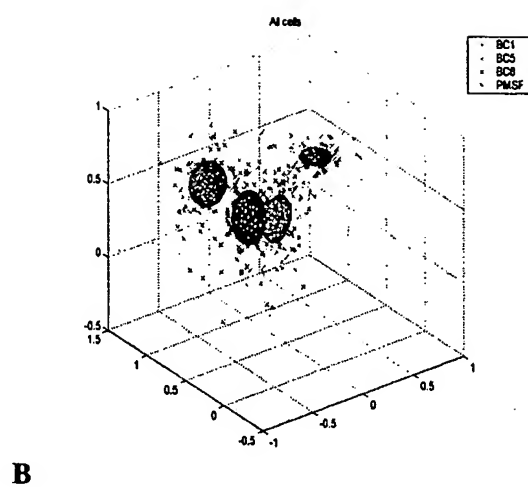
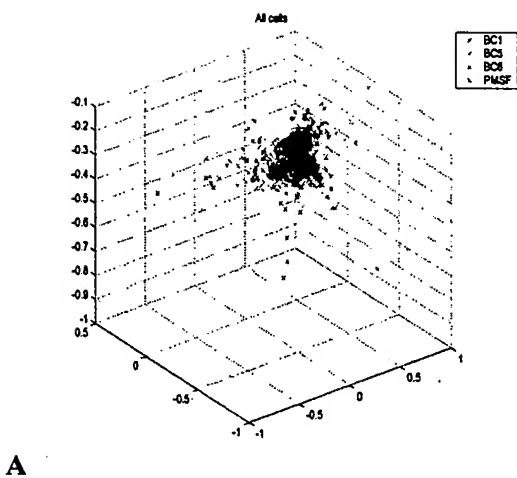
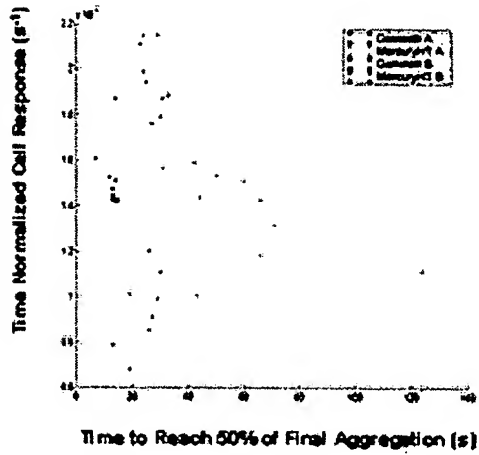


FIG. 67



	Gemini III n	Gemini III Mean	Gemini III σ
Fish A	9	4.1	2.4
Fish B	9	5.8	3.7
	MercuryHT n	MercuryHT Mean	MercuryHT σ
Fish A	9	12	23
Fish B	9	6.4	5.9

FIG. 68

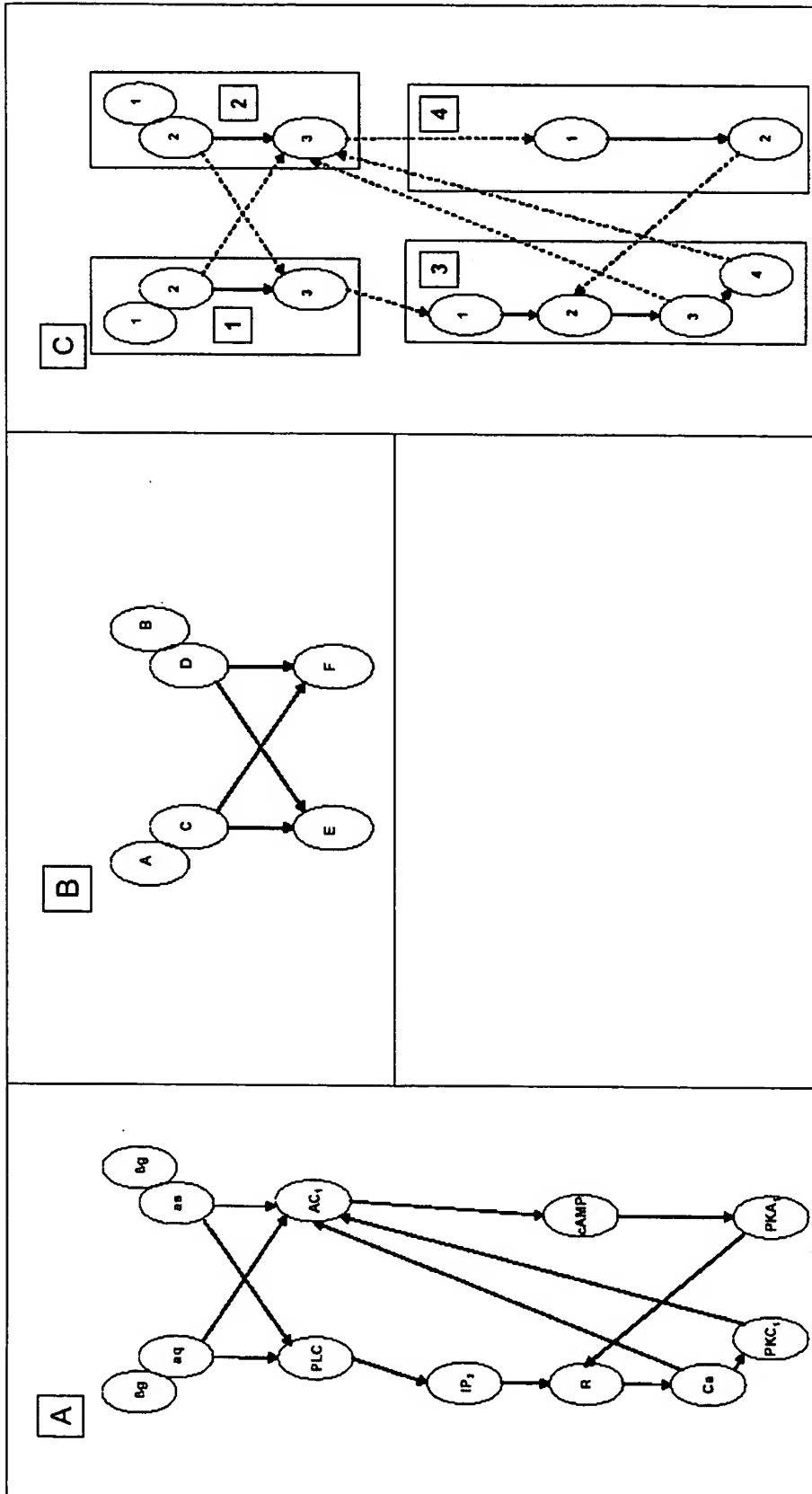


FIG. 69

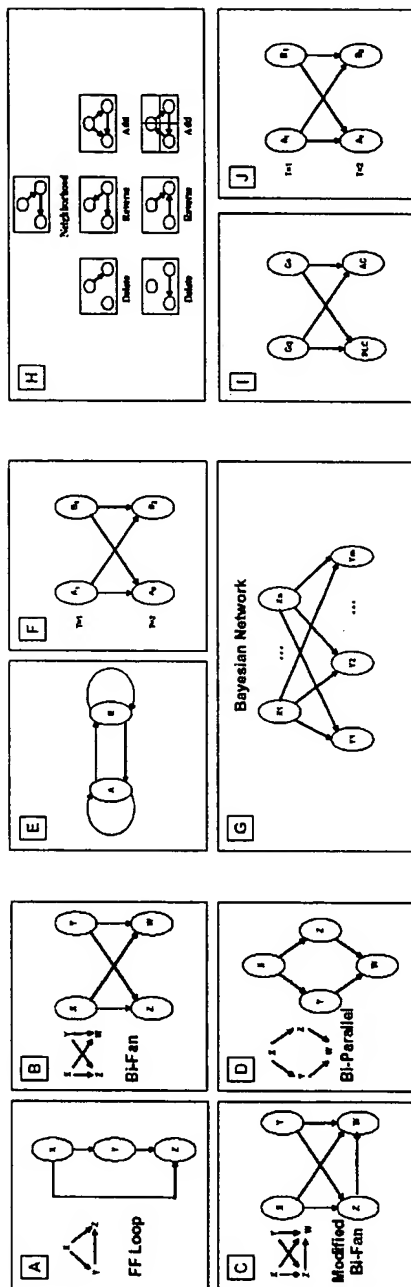


FIG. 70

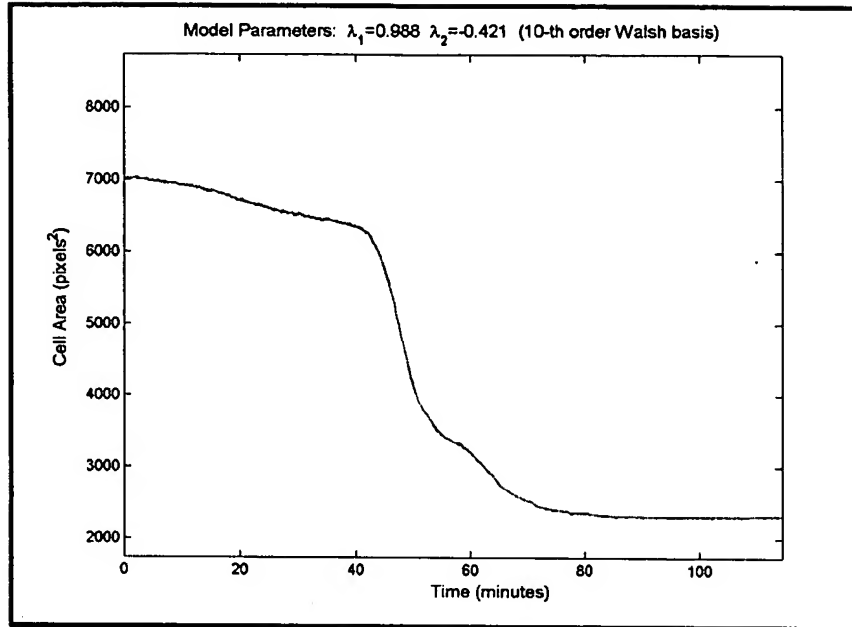


FIG. 71